ISSN 0300-9246

JOURNAL OF THE CHEMICAL SOCIETY

Dalton Transactions

A journal of inorganic chemistry

1988

ROYAL SOCIETY OF CHEMISTRY

© The Royal Society of Chemistry, 1988. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photographic, recording, or otherwise, without the prior permission of the publishers.

Printed in Great Britain by
Richard Clay Ltd.,
Bungay, Suffolk

AUTHOR INDEX

Abel, Edward W., 521, 1489
Abu-Salah, Omar M., 2297
Adam, Kenneth R., 1733
Adams, Harry, 489
Adatia, Trushar, 335, 751, 1683, 2889
Addison, Anthony W., 1429
Adhikary, Bibhutosh, 935
Adler, Peter, 1999
Admans, Gary A., 93
Adovasio, Victor, 133, 461, 2983
Agarwala, Umesh C., 2897
Aguiló, Magdalena, 141
Ahmed, Mushtaq, 257
Ahmet, Mustafa T., 1159
Ahsen, Vefa, 401
Aime, Silvio, 791
Airoldi, Claudio, 2113
Akitt, J. W., 1347
Akui, Toshifumi, 1021
Al-Ani, Faris T., 1705, 2329
Al-Ohaly, Abdel Razzak A., 2297
Al-Salim, Najih, 2363
Albano, Vincenzo G., 1067, 1103, 1237
Albinati, Alberto, 17
Alcock, Nathaniel W., 1089, 2959
Alegre, Bernardo, 819
Alexiev, Valentin D., 2649
Ali, Ahmed A. M., 2775
Ali, Hapipah Mohd., 553, 2545
Ali, M. Akbar, 2763
Ali, Rusmidah, 2077
Allen, Christopher W., 1405
Allevi, Claudio, 17, 1949
Almond, Matthew J., 809, 2255
Alonso, A. Gutiérrez, 537
Altaba, Manuel Font, 1617
Amadelli, Rossano, 2519
Amano, Fumie, 2735
Amigó, Josep M., 2033
Amodeo, Pietro, 1273
Amorós, Pedro, 1665
Anderegg, Giorgio, 1733
Anderson, David G., 1193
Anderson, James E., 1109
Andriollo, Antida, 913
Anema, Skelte G., 2629
Antiñolo, Antonio, 2685
Antolini, Luciano, 265, 909, 1075, 2501
Apreda, María C., 1523, 1927
Aquilini, Eleonora, 329
Arce, Alejandro, 913
Arena, Giuseppe, 1267
Arif, Atta M., 2713
Arif, Muhammad, 1493
Armentano, Salvatore, 1565
Armstrong, David R., 617
Arsenault, Gilles J., 1773
Artigao, Manuel, 141
Aruga, Roberto, 1115, 2971
Ascanio, Julian, 913
Ash, Lynne A., 859
Aspinall, Helen C., 2211
Atherton, Neil M., 1059
Attanasio, Donato, 1217
Audett, Judy A., 2629, 2635
Azenha, M. Emília D. G., 2893
Bailey, Neil A., 489, 839, 1449, 2817
Baird, Michael C., 1037
Bakar, Mohamad Abu, 2525, 2545
Baker, Paul K., 2729
Bal, Wojciech, 1357
Balakrishnan, Karappulli P., 1089
Baldas, John, 1725, 2585
Balegroune, Fadila, 353
Ballester, Maria-Jesus, 101
Bandoli, Giuliano, 611, 847
Bandy, Judith A., 1475
Banerjee, Rupendranath, 1557
Baranowski, Jerzy, 363
Barbe, Jean-Michel, 1109, 1921, 2569
Barbier, Pierre, 1719
Barbucci, Rolando, 1273
Barclay, J. Elaine, 2865, 2871
Barley, Mark, 2655
Barr, Donald, 617
Barratt, David S., 1079, 2065
Barron, Andrew R., 3047
Basato, Marino, 1213, 1425
Bastida, Rufina, 839, 1059
Bataille, Michel, 1357
Bates, Paul A., 227, 235, 521, 1493, 1795, 2177, 2193, 2753, 2787
Battaglia, Luigi Pietro, 191, 265, 909, 1713
Battle, Peter D., 83
Baumann, Franz-Erich, 1879, 1891
Beagley, Brian, 1095, 2261
Beattie, Ian R., 2047, 2759
Beckett, Michael A., 1969
Begum, Noor Shahina, 1303
Behm, Helmut J., 1429
Bekâroğlu, Özer, 401, 2831
Belforte, Antonio, 2921
Bellon, Pier, 1103
Beloritzky, Elie, 2817
Beltrán-Porter, Daniel, 3041
Beltrán, Aurelio, 1665
Beltrán, Daniel, 1665, 2747
Benedetti, Adriano, 1075, 2501
Bennett, Martin A., 315
Benning, Matthew M., 13
Benson, Christopher G., 2261
Beringhelli, Tiziana, 1281
Bermúdez, M. Dolores, 1139
Bernal, Serafín, 1765
Berno, Pietro, 1409
Berry, Andrew, 1089
Berry, Frank J., 2161, 2167
Bertani, Roberto, 2983
Bertolasi, Valerio, 1479, 1743
Beurskens, Paul T., 1429
Bharadwaj, Shashi K., 1719
Bhattacharjee, Manish, 2005
Bhattacharya, Anamika, 1557
Bhattacharyya, Ramgopal, 793
Bianchi, Antonio, 101
Biasci, Andrea, 315
Binsted, Norman, 2649
Biscarini, Paolo, 2915
Bishop, Peter T., 2535
Bläser, Dieter, 2171
Blachnik, Roger, 2055
Blake, Alexander J., 1165, 1561, 1861, 2513, 2645
Blunden, Stephen J., 1259
Boag, Neil M., 1501
Boas, John F., 2585
Boccardo, Danilo, 1249
Boese, Roland, 2171
Bond, Alan M., 2379
Bontempelli, Gino, 1425
Bookham, Jonathan L., 503
Bordoni, Silvia, 2103
Borras-Almenar, Juan J., 2747
Borras, Joaquin, 1999
Botana, Francisco J., 1765
Bott, Simon G., 1461
Botta, Mauro, 791, 1249, 2519
Bottomley, Frank, 2505, 2965
Bouaoud, Salah-Eddine, 353
Boukhris, Abdallah, 1109
Boukhris, Mohamed, 1921
Bouwman, Elisabeth, 1337
Bowie, John H., 2837
Bowmaker, Graham A., 2825
Bown, Mark, 925, 1467, 2597
Boyd, Alan S. F., 675
Bradley, Donald C., 2211
Braga, Dario, 913, 1067, 1237, 1803
Braunstein, Pierre, 353
Bretscher, Kathryn R., 2267, 2273
Brevard, Christian, 629
Brimblecombe, Peter, 705
Brint, Paul, 105
Brisdon, Brian J., 245
Brown, David A., 1107
Brown, Douglas E., 1405
Brown, Fiona P. E., 1139
Brown, Mark, 1969
Brown, P. Jane, 111
Brown, Scott S. D., 757, 1795, 2177, 2787
Brown, Stephen J., 277
Bueno, Isabel, 1911
Bunting, Heather E., 557
Burriel, Ramón, 3041
Burrows, Hugh D., 2893
Busca, Guido, 881
Busetto, Luigi, 1067
Buttafava, Armando, 1497
Buttrus, Nabeel H., 381
Cabani, Sergio, 373
Cabeza, Javier A., 629, 1437
Cafferty, Rhoda, 7
Calderazzo, Fausto, 2921
Camellini, Marisa Tiripicchio, 1249
Cameron, Alan D., 1037
Cameron, T. Stanley, 1371
Can, Sevket, 2831
Cannon, Roderick D., 2007
Cano, Felix H., 1523, 1927
Canovese, Luciano, 1049, 2135
Cantarero, Andrés, 2033
Canty, Allan J., 35
Carassiti, Vittorio, 2519
Cardin, Christine J., 173, 1107
Cariati, Franco, 363
Carlsen, Lars, 195
Carlton, Laurence, 2071
Carr, Stuart W., 769
Carriedo, Gabino A., 1623, 1957
Carugo, Oliviero, 1497
Casellato, Umberto, 899, 1853, 1857
Casolaro, Mario, 1273
Cassol, Alberto, 1781
Cassoux, Patrick, 1225
Castan, Paule, 587
Castellani, Carla Bisi, 1497
Castellano, Eduardo E., 1059
Cattalini, Lucio, 1049, 2135, 2347
Ceccanti, Norberto, 373
Chagas, Aécio P., 2113
Chakraburtty, Amiya K., 1557
Chang, Cheu-Ming, 123
Charsley, Stephen M., 293, 301
Chatterjee, Chinmay, 159
Chaudhuri, Mihir K., 243, 2005
Chaudhuri, Phalguni, 1367
Che, Chi-Ming, 239, 2153, 2879, 2885
Chen, Jiabi, 2803
Cheng, Cheu Pyeng, 123, 2695
Chessa, Gavino, 1479, 2135
Chicote, Maria T., 141
Chiesi-Villa, Angiola, 545, 1361, 1409, 1599, 1607, 2341
Chiu, Kwok W., 427
Christou, George, 309
Chung, Chung-Sun, 541, 2495
Chung, Lap-Yan, 2121
Ciani, Gianfranco, 163, 363, 1103, 1281
Cipriano, Robert A., 2483, 2677
Ciurli, Stefano, 1361, 2341
Claire, Preet P. K., 215
Clark, James H., 277
Clark, Robin J. H., 73, 973, 2601
Clark, Stephanie L., 859
Claver, Carmen, 1523
Clayden, Nigel J., 2649
Clegg, Simon L., 705
Clegg, William, 617, 1671, 2713, 2941
Clemenson, Peter I., 1689
Cloke, F. Geoffery, N., 1475, 2227
Coates, Catherine, 2509
Colbran, Stephen B., 173, 1107, 1199
Cole-Hamilton, David J., 7, 1079
Collison, David, 309
Colmanet, Silvano F., 1725
Colquhoun, Howard M., 2781
Colquhoun, Ian J., 503, 2177, 2787
Comba, Peter, 497, 2145
Compton, Neville A., 1671, 2941
Connelly, Neil G., 1623, 1631, 2509
Constable, Edwin C., 1837, 2121, 2655
Cook, Michael J., 1583
Cook, Stephen L., 2649
Cooper, Mervyn K., 1383, 2287
Cooper, Stephen R., 93
Cooper, Terry A., 2041

Corain, Benedetto, 1213, 1425
Corazza, Fabio, 2341
Cordes, A. Wallace, 1405
Coronado, Eugenio, 2747, 3041
Corr, Stuart A., 2655
Corradi, Anna Bonamartini, 191, 265, 909, 1713
Costes, Jean-Pierre, 129
Cowan, James A., 2681
Cowley, Alan H., 2127, 2713
Cox, Brian G., 733
Cradock, Stephen, 1193
Craig, Scott L., 1405
Crease, Allan E., 2781
Crespo, M. Carmen, 2509
Crespo, Margarita, 1617
Cros, Gérard, 129
Crosby, John, 2491
Cross, Ronald J., 1147
Croud, Vincent B., 73
Cruz-Garritz, Diana, 2393
Csavas, Julianna M., 2573
Cuadrado, Isabel, 149, 833
Cucinotta, Vincenzo, 1267
Cunningham, Desmond, 2621
Curtis, Neil F., 497, 2145
Curtis, Neville J., 47
D'Alfonso, Giuseppe, 1281
Dagnall, Stephen P., 1989
Dahan, Françoise, 129, 587
Daniel, Mervyn F., 1583
Daniele, Pier Giuseppe, 1115, 1267
Daniele, Salvatore, 1425
Daran, Jean-Claude, 2421
Darbieu, Marie-Hélène, 129
Darkwa, James, 2505
Das, Bimalendu, 243
Das, Prabir K., 1557
Das, Subroto, 159
Dasmahapatra, Anup K., 793
Daul, Claude, 393
Davidson, Jack L., 27, 2071, 2855
Davidson, Michael F., 1147
Dawes, Helen M., 227, 2475
Démarcq, Michel C., 2221
de Grampel, Johan C. van, 1099
de Ilarduya, Jesús Martínez, 2685
de Jesús, Ernesto, 819
de Lemos, Helen C., 1475
de Miguel, Amelio Vázquez, 819
Deb, Alok Kumar, 2051
Debaerdemaeker, Tony, 2033
Deeming, Antony J., 227, 235, 579, 827, 2193, 2475, 2753
Delgado, Esther, 207
Demartin, Francesco, 201, 2307
Demidowicz, Zenon, 1751
Dens, Annick J. D., 781
Denti, Gianfranco, 293
Deutsch, W. Francis, 1757
Dhathathreyan, Kaveripatnam S., 1099
Dhubhghaill, Orla Ni, 2739
Dianxun, Wang, 1963
Diebler, Hartmut, 2397
Dietzsch, Wolfgang, 97
Dillon, Keith B., 2077
Dilworth, Jonathan R., 2535
Diver, Catherine, 931
Diversi, Pietro, 133, 461, 2983
Dixon, Andrew J., 1501
Dobson, Christopher M., 2649
Doine, Hideo, 2007
Donovan-Mtunzi, Susan, 579
Dossett, Stephen J., 2453
Downs, Anthony J., 451, 809
Drake, Simon R., 1517
Dreissen, Willem L., 1337
Drew, Michael G. B., 215, 347, 1001, 1549, 2655, 2729, 2995
Duatti, Adriano, 899, 1743, 1853, 1857
Duckworth, Paul A., 2287
Duesler, Eileen N., 1289
Dugad, Laxmich B., 2797
Dunn, Adrian J., 1583
Dunn, Deborah A., 1449
Dunne, Barry J., 1623
Dupont, Jairton, 2421
Dyson, David B., 1795
Eaborn, Colin, 381
Eberhardt, Udo, 1549
Ebsworth, E. A. V., 477
Edwards, Anthony J., 257, 485
Edwards, Dennis A., 245
Edwards, Peter G., 219
Efraty, Avi, 469
Egsgaard, Helge, 195
El-Hendawy, Ahmed M., 1817, 1983
El-Kheli, Mohamed N. A., 381
El-Sayrafi, Oraib, 1095
El-Shatovry, Salah A., 601
Elbel, Susanne, 195
Elders, Julie M., 1347
Ellis, S. Richard, 2379
Emsley, John, 1493
Engelhardt, Lutz M., 1011, 2403
Erre, Liliana Strinna, 363
Errington, R. John, 1671, 2941
Ertas, Mümtaz, 401
Escriva, Emilio, 2747
Esho, Ferida S., 2995
Espinet, Pablo, 3005
Evans, Dennis F., 2927
Evans, John, 2649
Evans, Sam G., 2009
Evans, Stephen, 859
Ezomo, Osayi J., 1461
Fábián, István, 2231
Fabretti, Antonio C., 1075, 2501
Facchin, Giacomo, 1803
Fackler jun., John P., 2669
Falk, Heinz, 1709
Fallon, Gary D., 1823
Fan, Zhaochang, 2803
Fang, Duencheng, 1397
Fares, Vincenzo, 1217
Faridoon, 2555, 2739
Farnetti, Erica, 947
Farnier, Michel, 2569
Farwaha, Rajeev, 1773
Faus, Juan, 101, 2033
Favero, Giancarlo, 1425
Feinstein-Jaffe, Irene, 469
Fenton, David E., 685, 839, 1059, 2817
Fenton, Neil D., 2201
Ferguson, George, 2555, 2739
Fernández, José R., 3035
Ferragina, Carla, 851
Ferretti, Valeria, 1479, 1743
Fiaschi, Paolo, 1607
Field, John S., 1315
Figgis, Brian N., 117
Fincham, John K., 1169
Fini, Adamo, 1273
Firth, Stephen, 1501
Fischer, Jean, 353
Fittschen, Christa, 2323
Floriani, Carlo, 249, 321, 545, 1361, 1409, 1599, 1607, 2341
Foces-Foces, Concha, 1523, 1927
Folgado, José V., 3041
Font-Altaba, Manuel, 141
Font-Bardía, Mercè, 281, 1417
Fontaine, Xavier L. R., 741, 769, 925, 1179, 1185, 1467, 1785, 1969, 2059, 2235, 2555, 2597, 2739, 2809
Formosinho, Sebastião J., 2893
Forniés, Juan, 3005
Forsyth, J. Bruce, 117
Fortuño, Consuelo, 3005
Foster, Douglas F., 7
Fowkes, Hayat, 2597
Foxcroft, Clare N., 1449
Fraile, M. Nieves, 23
Frampton, Christopher S., 1159
Franklin, Kevin R., 2513
Fraser, Stuart G., 2729
Fries, Pascal H., 2817
Frolow, Felix, 469
Fürstner, Alois, 2023
Fu, Ying-Kai, 2495
Fuchita, Yoshio, 785
Fuertes, Amparo, 3041
Fukutomi, Hiroshi, 2007
Fumagalli, Alessandro, 163, 1237
Fung, Kwok-Wing, 2153
Gaitán, Manuel, 2141
Galli, Paola, 881
Ganazzoli, Fabio, 17, 1949
Gandolfi, Vittorio, 1213
García-Martín, Susana, 2141
García, Ester, 775
García, Rafael, 1765
García-España, Ennque, 101
García, M. Esther, 207, 2431, 2443, 3063
García, Oscar, 1911
Garlaschelli, Luigi, 17, 201, 1949, 2307
Gehring, Stefan, 1367
Geiser, Urs, 265
Gelover, Silvia, 2393
Gemelli, Lucia, 1049
Geoffrey, F., 1475
Gerloch, Malcolm, 2201
Ghedini, Mauro, 651, 1565
Ghilardi, Carlo A., 1063, 1833
Ghosh, Saktiprovad, 2607
Gibb, Terence C., 83
Gibson, Vernon C., 2227
Gieren, Alfred, 1693
Gilbert, Mark, 1631
Gilli, Gastone, 1479, 1743
Gilmore, Kerry, 2009
Gimeno, M. Concepción, 701
Ginestra, Aldo La, 851, 881
Giolando, Dean M., 2127
Giusti, Aleardo, 1075, 2501
Glass, William K., 1107
Glidewell, Christopher, 1079
Gobetto, Roberto, 791, 1249, 2519
Gogarty, Patricia M., 2161, 2167
Gold, Andrew A., 1583
Goldman, Alexander, 469
Golič, Ljubo, 97
Gomez-Romero, Pedro, 2747
González-Calbet, José M., 775
Goode, Michael J., 451
Goodfellow, Robin J., 2103
Gopalakrishnan, Jagannatha, 1
Goswami, Sreebrata, 2051
Goto, Midori, 895
Gott, George A., 1095, 2065, 2261
Gould, Robert O., 1861
Gouteron, Jacqueline, 2421
Gowik, Petra, 1529
Grandjean, Daniel, 353
Graziani, Mauro, 947
Graziani, Rodolfo, 899, 1853, 1857
Greatrex, Robert, 2335
Greaves, G. Neville, 2649
Green, Malcolm L. H., 557, 1697, 2227, 2851
Green, Michael, 1843
Greenwood, Norman N., 925, 1785, 1969, 2059, 2335, 2597, 2809
Greig, John A., 2645
Grepioni, Fabrizia, 913
Grey, Ian E., 2245
Griffith, William P., 647, 1679, 1817, 1983
Grosse-Ophoff, Markus J., 1867, 2683
Güngör, Muammer, 1653
Gütlich, Philipp, 1999
Guastini, Carlo, 545, 1361, 1409, 1599, 1607, 2341
Guest, Martyn F., 321
Guilard, Roger, 1109, 1921, 2569
Gupta, Vishnu D., 407, 1289, 1533
Gutmann, Viktor, 943, 2243
Haase, Wolfgang, 1367
Hague, David N., 1989
Hahne, Michael, 2255
Haines, Raymond J., 1315
Hakushi, Tadao, 2735
Hallam, Malcolm F., 335, 1461
Hambright, Peter, 2705
Hamor, Thomas A., 2363
Hampden-Smith, Mark J., 1773
Hanton, Lyall R., 2483
Harada, Akira, 729
Hardcastle, Kenneth I., 227, 579, 827
Harding, P. Alexander, 415
Harriman, Anthony, 2705
Harris, Robin K., 2775
Harrison, Gavin R., 1449
Harrison, Jane, 7
Hart, Ian J., 1867, 1899, 2683
Hashimoto, Satoru, 1641
Hassan, Fatma S. M., 89, 3011
Hassan, Refat M., 601, 605
Hassard, Keeley A., 1623
Hay, Caroline M., 2091
Hay, Robert W., 2763
Hayakawa, Shinji, 1827
Haymore, Barry L., 2935
Haynes, Anthony, 1501
Healy, Peter C., 1637, 2301, 2825
Heaton, Brian T., 163, 2103
Helgesson, Göran, 2117
Hempleman, Andrew J., 973, 2601
Henderson, Richard A., 509, 515
Henderson, William, 427
Hendry, Philip, 47
Henkel, Gerald, 657
Henrick, Kim, 415, 579, 1083, 1683, 2287
Herberhold, Max, 1693, 2027
Hewson, Geoffrey J., 1059
Heyward, Malcolm P., 1331
Higgins, Paula, 661
Higgins, Simon J., 457, 1179, 3011
Higgins, Tim, 2621
Hill, Anthony F., 1693, 2027, 2453, 3031
Hill, Robin, 1259
Hills, Adrian, 2871

Hin-Fat, Lee, 273
Hiorns, Anthony G., 859
Hiraki, Katsuma, 785, 2675
Hitchcock, Peter B., 381, 1837
Hitchman, Michael A., 1393
Hönig, Heike D., 3031
Ho, Tong-Ing, 123, 2695
Hofer, Ferdin, 2023
Holder, Alan J., 1861
Holloway, John H., 1341
Honda, Kazumasa, 895
Hope, Eric G., 61, 997, 1341
Horton, Andrew D., 1083, 1683, 2953
Houlton, Andrew, 2865
Howard, Judith A. K., 1879, 1891, 2903
Hsiou, Yu, 1397
Hübner, Thomas, 1693
Hu, Ying, 729
Huang, Xueying, 1487
Hubert-Pfalzgraf, Liliane G., 533
Huffman, John C., 309
Hughes, David L., 1153, 1705, 2525, 2535, 2545, 2871
Hughes, Mark, 2935
Huntley, Christopher M., 1193
Hursthouse, Michael B., 53, 219, 227, 235, 521, 669, 1169, 1493, 1689, 1737, 1795, 2103, 2177, 2193, 2475, 2753, 2787
Hussain, Wasif, 553, 2545
Hussein, Ahmed, 1853
Hyde, Timothy I., 1165, 1861
Hynes, Michael J., 905
Ibáñez, Rafael, 1665
Iliopoulos, Peter, 433, 1823
Imperatori, Patrizia, 1217
Ingrosso, Giovanni, 133, 461, 2983
Innocenti, Paolo, 1063
Inoue, Yoshihisa, 2735
Isaac, Ibrahim Y., 2701
Ito, Takashi, 2241
Iwamoto, Etsuro, 1935
Jackman, Martin P., 2843
Jacobsen, Geraldine E., 1011
Jacobsen, Grant B., 741, 1185, 2235, 3011
Jagannathan, R., 983
Jagerovic, Nadine, 2569
Jagner, Susan, 2117
Jakubovic, David A., 2927
Jameson, Geoffrey B., 2747
Jameson, Reginald F., 943, 2109, 2243
Jardine, Fred H., 1653
Jastrzebski, Johann T. B. H., 2975
Jeannin, Yves, 1591
Jedral, Wojciech, 733
Jeffery, John C., 207, 1121, 1131, 1867. 2431, 2443, 2453, 2683, 3017, 3063
Jekel, Andries P., 1099
Jenkins, John W., 2161
Jennings, Keith R., 2905
Jeragh, Bakir, 2763
Jerez, Antonio, 2141
Jetha, Nigel K., 1843
Jiang, Shangen, 1487
Johnson, Brian F. G., 173, 1107, 1199, 1205, 1421, 1517, 2091
Johnson, David A., 445
Johnson, Owen, 2903
Johnston, Roy L., 1751
Jones, Christopher J., 257, 293, 301, 2769
Jones, Peter, 2267, 2273
Jones, Peter G., 341, 2323, 2507
Jones, Peter J., 2047, 2759
Jones, Ray, 803, 1569
Julve, Miguel, 2033
Junk, Peter C., 1011
Juranić, Nenad, 79
Kabir, Shariff E., 579, 827
Kadish, Karl M., 1109
Kaitner, Branko, 2739
Kakihana, Hidetake, 2965
Kalck, Philippe, 1523
Kamarudin, Rose A., 1205
Kanamori, Kan, 1827
Kane-Maguire, Leon A. P., 315, 2009
Kanesaka, Junko, 1021
Karthikeyan, Sakthivel, 1371
Kašpar, Jan, 947
Kawai, Kiyoyasu, 1827
Kawatani, Masanori, 785
Kaye, Perry T., 2121
Kelly, David G., 1095
Kelly, Dermot F., 905
Kelly, Paul F., 803, 1053, 1569
Kemball, Alan C., 2953
Kemmitt, Raymond D. W., 427
Kemp, Terence J., 285, 2905
Kennard, Colin H. L., 2353, 2357
Kennedy, John D., 925, 1467, 1785, 1969, 2059, 2555, 2597, 2739, 2809
Kent, Alexander G., 489
Kerridge, David H., 2701
Khan, Badar T., 67
Khattar, Rajesh, 1421
Khoe, Ging H., 2015
Kida, Sigeo, 641
Kieboom, Antonius P. G., 717, 2723
Kildea, John D., 1637
Kimia, Jabatan, 1549
Kirmse, Reinhard, 97
Kitagawa, Susuma, 1907
Kitchen, Simon J., 685
Klapötke, Thomas, 1529
Klinszporn, Lucyna, 369
Knight, Christopher T. G., 1457
Köhler, Klaus, 97
Köpf, Hartmut, 1529
Koga, Genji, 1641
Kohata, Susumu, 1943
Koikawa, Masayuki, 641
Koley, Aditya P., 2607
Kozlowski, Henryk, 363, 887, 1357
Krembel, Jean, 1357
Kriege, Michael, 657
Krishnamurthy, Setharampattu S., 1371
Kroto, Harold W., 2041
Küppers, Heinz-Josef, 1367
Kuhn, Norbert, 2171
Kumamaru, Takahiro, 1935
Kumar, Rajesh, 1045
Kurahashi, Masayasu, 895
Kurihara, Lynn K., 13
Kurmoo, Mohamedally, 973
Kyriacou, Panos, 1915
Lázaro, Isabel, 155, 2323
Lacey, Anthony R., 1383
Laguna, Antonio, 23, 155, 341, 701, 2323
Laguna, Mariano, 23, 155, 701, 2323
Lahoz, Fernando J., 173, 1107, 1199, 1205
Lai, Ting-Fong, 239
Lam, Michael Hon-Wah, 2885
Lanfredi, Anna Maria Manotti, 651, 819, 2685
Latour, Jean-Marc, 2817
Lau, Keung, 239
Laurent, Jean-Pierre, 129, 587
Lavery, Aidan, 347, 2995
Lawrance, Geoffrey A., 47, 497, 931, 2145
Leal, Javier, 2393
Lecomte, Claude, 1109, 1921
Lee, Wai-On, 2153
Leigh, G. Jeffery, 553, 1153, 2525, 2545, 2865, 2871
Leitão, M. Luísa P., 2893
Len, Ching-Hohn, 541, 2495
Lenstra, Albert T. H., 1429
Leong, Anthony J., 1733
Leoni, Piero, 329, 635
Leporati, Enrico, 421, 953, 1107
Leung, Wing-Por, 2403
Levason, William, 61, 997, 1341, 1377, 2483, 2677
Lewis, Jack, 173, 1107, 1199, 1205, 1421, 1517, 2091, 2121
Licoccia, Silvia, 1565
Lim, Meng-Chay, 2843
Liman, Ferid, 887
Lin, Jiann T'suen, 1397
Lindoy, Leonard F., 1733
Lindsell, W. Edward, 675
Linert, Wolfgang, 943, 2109, 2243
Liu, Ling-Kang, 1397
Liu, Yu, 2735
Livera, Cynara, 887, 1357
LLoret, Francisco, 101
Lobana, Tarlok S., 1401, 2913
Lockhart, Joyce C., 1293
Lockwood, Susan J., 839
Longoni, Giuliano, 201
Lorenzelli, Vincenzo, 881
Losada, José, 149, 833
Lowe, Barrie M., 2513
Lucherini, Antonio, 133, 461, 2983
Lumini, Tito, 133, 461
Luneau, Dominique, 1225
Mabbs, Frank E., 309
Mabrouk, Hassan E., 1045, 2539
Macdonald, Christopher J., 2279
Macdonald, Colin J., 2545
Machell, Jonathan C., 1751
Machida, Katsunosuke, 1907
Mackay, Kenneth M., 2629, 2635
Mackay, Maureen F., 1725
Mackie, Anthony G., 1095
MacKinnon, Peter, 1785, 2059, 2597, 2809
Macquarrie, Duncan J., 277
MacRory, Philomena P., 1095
Madsen, Ian C., 2245
Magon, Luciano, 899, 1743, 1853, 1857
Mairesse, Gaetan, 1719
Maitlis, Peter M., 629
Mak, Shing-Tat, 2153
Mak, Thomas C. W., 239, 2153, 2353, 2357, 2879, 2885
Malatesta, Maria Carlotta, 17, 1949
Manassero, Mario, 201, 2307
Mandal, Sanat K., 935
Manfredini, Tiziano, 265
Mann, Brian E., 489, 629
Manohar, Hattikudur, 1297, 1303
Manoharan, Periakaruppan T., 2607
Manoli, Jean-Marie, 3055
Manuel, Christopher P., 489
Marangoni, Giampaolo, 1479
Marchetti, Fabio, 133, 329, 461, 635, 2983
Marchi, Andrea, 899, 1743, 1853, 1857
Marder, Seth R., 1697
Marken, Frank, 2453
Marmion, Mary E., 2385
Martin, José, 141
Martinengo, Secondo, 163, 1237, 2103, 2307
Martinez, Manuel, 2239, 2683
Marzak, Saïd, 3055
Marzotto, Armando, 1713
Masaguer, José R., 149, 833
Masciocchi, Norberto, 201, 2307
Maso, Grazia Dal, 1273
Mason, Joan, 2935
Massucci, Maria Antonietta, 851, 881
Masuda, Hideki, 1907
Mathieu, René, 281, 1417
Matsubara, Tetsuaki, 2241
Matsubayashi, Gen-etsu, 253, 967, 2215, 3059
Matsumoto, Keiji, 657
Matsumoto, Naohide, 1021, 1943
Matt, Dominique, 353
Mattogno, Giulia, 1217
Mayo, Richard A., 477
Mays, Martin J., 1083, 1683, 2953
Mazumdar, Shyamalava, 2797
Mazzanti, Marinella, 1361
Mazzi, Ulderico, 611, 847
McAlees, Alan, 1773
McArdle, Patrick, 2621
McAuley, Alexr, 2279
McAuliffe, Charles A., 1095, 2065, 2261
McCann, G. Malachy, 661
McCarthy, Paul J., 2787
McCleverty, Jon A., 257, 293, 301, 2769
McCrindle, Robert, 1773
McDonald, Robbie G., 1393
McFarlane, William, 503, 2177, 2787
McGhee, Laurence, 1309
McGilligan, Brian S., 1737
McGrady, G. Sean, 451
McKenzie, Alison, 711
McKillop, Kieran P., 347, 2995
McLean, Colin H., 839, 1059
McMahon, Marion R., 711
McManus, James, 2621
McManus, Neil T., 1679
McPartlin, Mary, 335, 579, 751, 1083, 1683, 2287, 2889
McQueen, Roderick C. S., 2655
McWhinnie, William R., 2363
Meah, M. Nafees, 227, 235, 2193
Medhi, Okhil K., 2797
Menabue, Ledi, 265, 909, 1713
Menziani, Maria C., 1075
Mercer, Richard J., 1843
Merlino, Stefano, 461
Meyer-Bäse, Karen, 341
Micera, Giovanni, 363, 909
Michelin, Rino A., 1803
Midollini, Stefano, 1063, 1833

Miguel, Maria da Graça M., 2893
Millan, Carlos, 2397
Millikan, Mary B., 2335
Millington, Keith R., 2759
Mingos, D. Michael P., 335, 781, 1461, 1509, 1657, 1751
Miravitlles, Carles, 3041
Mishra, Anjali, 2897
Mitra, Samaresh, 2797
Miyamura, Kazuo, 1543
Modro, Tomasz A., 1915
Moehring, Gregory A., 245, 1701
Moldes, Isabel, 1417
Molinari, Henriette, 1281
Molloy, Kieran C., 1259, 2621
Monaghan, Patrick K., 595
Monari, Magda, 1067
Moneti, Simonetta, 1833
Monge, Angeles, 1911
Moody, Richard, 2817
Moore, Laila S., 23, 781
Moore, Peter, 1089, 2959
Morán, Moisés, 149, 833
Moratal, José M., 101
Moreton, Anthony D., 1989
Moss, Ian, 521, 1489
Mosseri, Shlomo, 2705
Motevalli, Majid, 53, 219, 669, 1737
Motori, Antonio, 265
Mould, Roy A. S., 2677
Mousa, Mahmoud A., 601, 605
Mozzon, Mirto, 1803
Mtetwa, Victor S. B., 2227
Müller, Norbert, 1709
Mukaida, Masao, 2965
Mukaida, Yasumichi, 2087
Mulvey, Robert E., 617
Muñoz-Reja, Cristina, 149
Munakata, Megumu, 1907
Murakami, Hiroyuki, 1021
Murphy, Brian P., 1001
Murray III, Henry H., 2669
Murray, Keith S., 433, 1823
Murray, Martin, 2177, 2787
Musgrove, Rupert J., 1879, 1891
Nag, Kamalaksha, 935, 2373
Naidoo, Silverkanabathi, 2315
Nakashima, Motoharu, 785
Nanjundaswamy, Kirakodu Seetharama, 1
Nardelli, Mario, 133, 461, 2983
Narula, Chaitanya K., 1289
Narula, Suraj P., 1719
Neaves, Bryan D., 293, 301
Nelson, Jane, 347, 1001, 2995
Nelson, S. Martin, 347, 1001, 2995
Nestor, Karl, 2597
Neta, Pedatsur, 2705
Neve, Francesco, 651, 1565
Newman, Paul A., 557
Nicholson, Brian K., 2629
Nicolini, Marino, 611, 847
Nielson, Alastair J., 647
Nieuwenhuizen, Maarten S., 717
Nishida, Yuzo, 691, 2003
Niven, Margaret L., 1915
Nöth, Heinrich, 407, 1533
Nobel, Dominique, 353
Nocentini, Mila, 1273
Noltemeyer, Mathias, 2507
Norman, Nicholas C., 1671, 1843, 2127, 2713, 2941
Nowogrocki, Guy, 1719
Nuber, Bernhard, 1367
Nunn, Christine M., 2127
Nutkins, Jennifer C., 2655
Ōkawa, Hisashi, 641, 1021, 1943
O'Hair, Richard A. J., 2837
O'Hare, Dermot, 2851
O'Leary, Margaret A., 497, 2145
O'Reilly, Eric J., 2353, 2357
Obendorf, Dagmar, 1709
Ogata, Koreharu, 2225
Ogden, J. Steven, 61, 997, 1341, 1645
Ohgomori, Yuji, 895
Ohkubo, Katsutoshi, 1641
Ohnuma, Kohji, 785
Ohyoshi, Akira, 1021, 1943
Oishi, Shigero, 2675
Okur, Ali Ihsan, 2293
Onishi, Masayoshi, 2675
Ooi, Bee-Lean, 2239, 2683
Organ, Gregory J., 2287
Orlandini, Annabella, 1063, 1833
Oro, Luis A., 1437, 1523, 1927
Orpen, A. Guy, 1623, 1631, 1843, 2713
Orrell, Keith G., 521, 1489
Osella, Domenico, 791, 1249, 2519
Ossor, Houssaine, 2975
Ostacoli, Giorgio, 1115, 1267
Otero, Antonio, 2685
Ouchi, Mikio, 2735
Pakulski, Marek, 2127, 2713
Palaniandavar, Mallayan, 1429
Palou, Josefina, 733
Pantelider, Evangelos, 2041
Parada, Carmen, 1911
Parish, R. V. ('Dick'), 23, 781, 1795
Parkes, Harold G., 1169
Parkes, Peter, 7
Parrott, Michael J., 1121, 3017
Pasquali, Marco, 329, 635
Pasqualini, Roberto, 1743
Patalinghug, Wyona, 2301
Patrono, Pasquale, 851
Paul, Parimal, 2373
Paul, Pradip Cha, 2051
Pearsall, Mary-Ann, 2713
Peel, J. Barrie, 1963
Pelizzi, Giancarlo, 2915
Pellacani, Gian Carlo, 265, 1713
Peloso, Arnaldo, 1577
Pergola, Roberto Della, 17, 201, 2307
Peringer, Paul, 1709
Pertici, Paolo, 315
Peters, Joop A., 717, 961, 2723
Petković, Djordje M., 1813, 2565
Pettit, Leslie D., 887, 1357
Pfeffer, Michel, 2421, 2975
Phillips, Leonidas, 1383
Philoche-Levisalles, Michèle, 1591
Phulambrikar, Alka, 159
Pickett, Christopher J., 553, 1705, 2329
Pico, Carlos, 2141
Piggott, Brian, 1983
Pilarczyk, Michał, 369
Pinillos, M. Teresa, 1523, 1927
Pitteri, Bruno, 1479
Pletcher, Derek, 2483, 2677
Pócsi, István, 2231
Poggi, Antonio, 1497
Poliakoff, Martyn, 1501
Poojary, M. Damodara, 1297, 1303
Portanova, Roberto, 1781
Porter, Leigh C., 2669
Potvin, Claude, 3055
Povey, David C., 2913
Powell, Nigel A., 2483, 2677
Prasad, Lakanaju Sreeramacha, 2607
Preez, A. Louis du, 2315
Price, Richard J., 2649
Pritchard, Robin G., 1095, 2261
Probst, Michael, 1709
Proud, Graeme P., 2475
Prouse, Lesley J. S., 427
Prout, Keith, 1475, 2227
Pucci, Sergio, 2983
Puddephatt, Richard J., 595
Puebla, Enrique Gutiérrez, 1911
Puga, Jose, 913
Pumphrey, Carol A., 1817
Purohit, Sanchita, 2607
Pyburn, Simon, 887
Pyell, Ute, 1121
Qureshi, Khurshid B., 1489
Raber, Douglas J., 717
Raithby, Paul R., 173, 1107, 1199, 1205, 1421, 2091, 2121
Raju, Madhusudhan, 67
Ramis, Gianguido, 881
Ramsden, James A., 2491
Randle, Neil P., 2753
Rankin, David W. H., 451, 1193, 2335
Rao, M. N. Sudheendra, 1445
Raptis, Raphael G., 2669
Raston, Colin L., 987, 991, 1011, 2403
Rattay, Wilfried, 1533
Raven, Stephen J., 1623
Rawle, Simon C., 93
Reader, C. James, 1089, 2959
Real, José A., 1999
Reed, David, 617, 2739
Reedijk, Jan, 1337, 1429
Refosco, Fiorenzo, 611, 847
Rehorek, Detlef, 285
Reid, Gillian, 1561
Reventós, L. Ballester, 537
Reverend, Brigitte Decock-Le, 887
Reynolds, Bradley J., 2357
Reynolds, Philip A., 117
Reynolds, Sarah J., 293, 301
Rice, Richard E., 1773
Richards, Raymond L., 2393, 2935
Richens, David T., 711
Ridmy, Mohammed, 1523
Riera, Victor, 1591, 1623, 1957
Rizzarelli, Enrico, 1267
Roberts, Roger M. G., 1549
Robertson, Heather E., 451, 2335
Robins, Robert G., 2015
Robinson, Stephen D., 415
Robinson, Ward T., 2187
Rocamora, Mercè, 1147
Rodríguez-Izquierdo, José M., 1765
Roe, S. Mark, 2959
Roesky, Herbert W., 2507
Rogers, Robin D., 13
Romero, Jaime, 1059
Ros, Josep, 281, 1417
Rosi, Marzio, 249, 321
Rossi, Roberto, 899, 1743, 1853, 1857
Rothin, Anne S., 257
Roy, Partha S., 793
Royo, Pascual, 819, 2685
Ruiz-Pérez, Catalina, 1693
Ruiz, Javier, 1591
Ruiz, Miguel A., 1131
Rushworth, Simon A., 7
Russell, David R., 427
Ruvarac, Aleksandar Lj., 2565
Rzepa, Henry S., 3051
Šik, Vladimir, 521, 1489, 2177
Sägebarth, Michael, 111
Sánchez, Gema, 1957
Sabat, Michael, 329
Sabatino, Piera, 1803
Sabry, Dina Y., 2705
Saburi, Masahiko, 1543
Sakaki, Shigeyoshi, 1641
Sakurai, Tosio, 1543
Saladini, Monica, 909
Salam, Sithy S., 2769
Salem, Geoffrey, 2403
Sales, Joaquim, 1617
Sales, Keith D., 2211
Salmon, G. Arthur, 2843
Salter, Ian D., 751, 757, 1795, 2177, 2787, 2889
Salvadori, Piero, 315
Sammartano, Silvio, 1267
Sanchez-Delgado, Roberto A., 913
Sandhu, Maninderjeet K., 1401, 2913
Sandrolini, Franco, 265
Sangchakr, Benchang, 105
Sanni, S. Bamidele, 1429
Satoh, Keiichi, 591
Saunders, Graham C., 1697
Savage, Paul D., 669
Savariault, Jean-Michel, 1225
Sawada, Kiyoshi, 591
Schimkowiak, Jürgen, 2507
Schlaepfer, Carl Wilhelm, 393
Schmidt, Volker, 549
Schröder, Martin, 1165, 1561, 1861, 2645
Scrimshire, Peter J., 2817
Sécheresse, Francis, 3055
Seddon, Kenneth R., 1837
Seki, Yuriko, 1827
Sekino, Hiroyuki, 1827
Seregni, Claudio, 2103
Sgamellotti, Antonio, 249, 321
Shan, Chong Hsin, 1397
Shand, Mark A., 285
Sharma, Hemant K., 1719
Sharp, Christopher, 2579
Shaw, Bernard L., 89, 457, 725, 741, 769, 1179, 1185, 2099, 2235, 3011
Shaw (née Gözen), Leylâ S., 1169
Shaw, Robert A., 1169, 1757, 2591
Sheldon, John C., 2837
Sheldrick, George M., 2507
Sherman, Darren J., 781
Sherwood, Paul, 207, 1879, 1891, 2431, 2443, 2453, 3063
Shi, Gaoguan, 1487
Shibahara, Takashi, 2239, 2683
Shimizu, Akio, 1827
Shimizu, Kiyoshi, 2083, 2087
Shimono, Hisao, 1907
Shimura, Kazutoshi, 2965
Shirai, Takahiro, 2087
Short, Richard L., 1689
Siddique, Rana M., 1309
Sieklucka, Barbara, 2905
Silva, Maria L. C. P. da, 2113

Silver, Jack, 1159, 1549, 2865
Simon, Arndt, 111
Simonneaux, Gérard, 2615
Singh, Rajendra P., 1289
Singh, Rajendrasen S., 159
Sirat, Kamaliah, 2245
Siriwardene, Dileni K., 2851
Sironi, Angelo, 163, 363, 1281
Skelton, Brian W., 35, 497, 987, 1011, 2145, 2301, 2825
Slawin, Alexa M. Z., 2491
Slim, David R., 485
Smit, Diana N., 1315, 1421
Smith, Deborah J., 2649
Smith, Glen W., 2913
Smith, Graham, 2353, 2357
Smith, J. David, 381
Smith, Martin J., 725, 2099
Smith, Peter W., 1393, 2245
Smith, Vedene H., 1037
Snaith, Ronald, 617
Sodano, Patrick, 2615
Solans, Xavier, 141, 281, 1417, 1617, 1957
Soules, Régis, 587
Sousa, Antonio, 1059
Spalding, Trevor R., 2555, 2739
Speier, Gábor, 2663, 3063
Spencer, Catriona M., 489, 685
Spencer, Lee, 2279
Spicer, Mark D., 1377
Spogliarich, Roberto, 947
Sreelatha, Channareddy, 407
Srinivasan, Vangalur S., 1413
Srivastava, Dileep K., 407, 1533
Stach, Joachim, 97
Stanger, Gillian, 1341
Steel, Andrew T., 83
Steer, Ian A., 451
Stella, Sergio, 545
Stephenson, David, 521, 1489
Stone, F. Gordon A., 207, 1121, 1131, 1139, 1867, 1879, 1891, 1899, 2431, 2443, 2453, 2467, 2683, 3017, 3031, 3035, 3063
Stranger, Robert, 1393, 2245
Stretton, Geoffrey N., 725, 2099
Strona, Luisella, 2103
Subramani, Kullagounder, 1413
Suffolk, Roger J., 2041
Sullivan, Alice C., 53, 381
Sun, Biao, 1487
Suzuki, Toshio, 591
Sykes, A. Geoffrey, 2239, 2579, 2683, 2843
Tai, Akira, 2735
Takahashi, Kazuhiro, 691, 2003
Takahashi, Kei, 967
Takahashi, Shigetoshi, 729
Takaki, Isato, 2675
Takeuchi, Kenneth J., 2385
Tamburini, Sergio, 685
Tanaka, Toshio, 253, 967, 2215, 3059
Tang, Wai-Tong, 2879, 2885
Tanner, S. Peter, 2261
Tarantelli, Francesco, 249, 321
Tarli, Franco, 1217
Tartón, M. Teresa, 155
Tate, John P., 257
Tattershall, Bruce W., 2055
Tavakkoli, Kayumars, 381
Taylor, Max R., 2573
Taylor, Michael J., 647
Taylor, Stephen A., 2781
Tejel, Christina, 1927
Temperley, John, 309
Thomas, C. J., 1445
Thomson, Andrew J., 1583
Thorez, Alain, 1523
Thornton-Pett, Mark, 89, 741, 769, 925, 1185, 1969, 2059, 2099, 2103, 2809, 3011
Tiekink, Edward R. T., 1401
Tinè, Maria Rosario, 373
Tiripicchio-Camellini, Marisa, 1437
Tiripicchio, Antonio, 651, 819, 1249, 1437, 2685
Tisato, Francesco, 611, 847
Titcombe, Louise A., 35
Tobe, Martin L., 1049, 2135, 2347
Tolazzi, Marilena, 1781
Toma, Hani J., 1107
Tomas, Milagros, 3005
Tomat, Giuliana, 1781
Tomihisa, Daijo, 2083
Tomlinson, Anthony A. G., 851
Torrens, Hugo, 2393
Toth, Andras, 1599
Toupet, Loïc, 757, 2615
Tourné, Claude M., 2411
Tourné, Gilbert F., 2411
Towell, Ingrid M., 245
Treadgold, Andrew T., 2347
Trocha-Grimshaw, Jadwiga, 347, 2995
Tschinkowitz, Axel, 943, 2109, 2243
Tsuboyama, Kaoru, 1543
Tsuboyama, Sei, 1543
Tsunoda, Mitsukimi, 533
Tuchagues, Jean-Pierre, 1225
Tuck, Dennis G., 1045, 2539
Tucker, Andrew J., 2941
Turner, James J., 1501
Turp, Janet E., 1837
Twiss, Paul, 2403
Tyeklár, Zoltán, 2663, 3063
Ugozzoli, Franco, 651
Underhill, Allan E., 1689
Usami, Takashi, 183
Usón, Alfredo, 341, 701
Usón, Rafael, 23, 155, 341, 701, 2323, 3005
Valero, Caridad Ruiz, 1911
Vallet-Regí, María, 775
van Albada, Gerard A., 1429
van Bekkum, Herman, 2723
van Koten, Gerard, 2975
van Westrenen, Jeroen, 2723
Vasapollo, Guiseppe, 2855
Veiga, María Luisa, 2141
Veronese, Augusto C., 1213
Vezzosi, Ida Maria, 191
Vicente, José, 141
Vigato, P. Alesso, 685
Viñas, Josep M., 281
Vincent, Beverly R., 1371
Vithal, M., 983
Vitulli, Giovanni, 315
Vyas, Krishnamurthi, 1371
Wackerle, Lorenz, 469
Waghorne, W. Earle, 1107
Wagner, Fritz E., 1679
Wahdan, Moustafa H., 605
Wainwright, Kevin P., 2301, 2573
Walker, David G., 1153
Walker, Gordon T., 617
Walker, Neil M., 675, 1697
Wallis, Julian M., 1475
Walton, Richard A., 245, 1701
Wang, Sen Ren, 123, 2695
Ward, Michael D., 2655
Watanabe, Yoshihisa, 895
Watkins, David A., 2591
Watson, Michael J., 1509
Watts, John D., 2041
Webster, Michael, 1377, 2483
Wehman, Erik, 2975
Weidmann, Hans, 2023
Weiss, Johannes, 1367
Welch, Alan J., 3005
Wells, Cecil F., 1331
Wernberg, Ole, 1837
West, Antony A., 2363
West, Paul R., 2279
Westmoreland, Don, 2127
Wheatley, J. Denis, 1653
Whitaker, Claire R., 987, 991
White, Allan H., 35, 497, 987, 991, 1011, 1637, 2145, 2301, 2403, 2825
White, Colin, 2491
White, Jonathan M., 1631
White, Peter S., 2965
Whitton, Alan J., 2091
Wieghardt, Karl, 1367
Wilkins, Cuthbert J., 2187
Wilkinson, Geoffrey, 53, 219, 669, 1737
Willett, Roger D., 265
Willey, Gerald R., 215
Williams, David J., 803, 1569, 1983, 2491, 2781
Williams, Ian D., 1461, 1509, 1751
Williams, Michael L., 2467
Williams, Robert J. P., 2315
Willson, Andrew D., 2047, 2759
Wilson, William F., 27
Winfield, John M., 1309
Winter, Mark J., 1449, 2941
Wöhrle, Dieter, 549
Wong, Anthony C. C., 219
Wong, Luet-Lok, 2851
Woodward, Simon, 1449
Woollins, J. Derek, 803, 1053, 1569, 3051
Wordel, R., 1679
Wright, Thomas C., 1737
Xu, Quan Y., 1109
Xu, Weihua, 2803
Xue, Gi, 1487
Yabe, Takashi, 1935
Yamaguchi, Osamu, 2083, 2087
Yamaguchi, Yasuhiro, 2215
Yamamoto, Shyoko, 729
Yamamoto, Yuroku, 1935
Yamasaki, Shoji, 1935
Yamase, Toshihiro, 183
Yamashita, Sadatoshi, 1943
Yamin, Bohari M., 1549
Yañez, Ramón, 1417
Yates, Paul C., 347, 1001, 2995
Yılmazer, Emel, 401
Yin, Jianguo, 2803
Yip, Wai-Hing, 2353
Yokoyama, Kenji, 253, 3059
Yokoyama, Masataka, 2225
Yokoyama, Takashi, 1935
Yoshida, Shin-ichi, 895
Young, Nigel A., 1645, 2047
Yousif, Yousif Z., 1837
Zakeeruddin, S. M., 67
Zanazzi, Pier Francesco, 1607, 2921
Zanello, Piero, 635
Zanoli, Aline Franca, 191
Zanonato, Pierluigi, 1781
Zanotti, Valerio, 1067
Zauder, Edgar, 2171
Zerbinati, Orfeo, 1115
Zeying, Zhang, 2187
Zhenyang, Lin, 1657
Ziebeck, Kurt R. A., 111
Zora, Jalal A., 1837

SUBJECT INDEX, 1988

ACETAMIDE
Molten acetamide–potassium thiocyanate eutectic: spectroscopy of first-row transition metal compounds in a room temperature melt, 2701–4

ACETATE
Infrared, Raman, and resonance-Raman spectra of $[Mo_2(O_2CCH_3)_4]$ and $[Mo_2(O_2CCD_3)_4]$, 973–82
Polynuclear manganese(II) complexes with Robson-type ligands. Synthesis, characterization, molecular structure, and magnetic properties, 1225–36
Synthesis, magnetic properties, redox behaviour, and crystal structure of the bridged binuclear nickel(II) complex $[Ni_2(\mu\text{-}OH)(\mu\text{-}CH_3CO_2)_2L_2]ClO_4\cdot H_2O$, 1367–70
Bis(acetato)bis[4-(*N*-acetylamino)pyridine]aquacopper(II)–hydrogen fluoride–hydrate (1/2/2): *X*-ray structure reveals $H_2O\cdot HF$ hydrogen bonded in the lattice, 1493–6
X-Ray crystal structure of tetra-acetatobis(tetrathiafulvalene)dirhodium(II) and the properties of its iodine-doped complex, 3059–62

ACETONE
Electrophilic behaviour of nitrosyls: the reactions of ketones with nitrosyls and the crystal and molecular structure of the product of the reaction between *trans*-chloro(nitrosyl)tetra(pyridine)ruthenium and acetone, 2965–70

ACETONITRILE
X-Ray crystal structure identification of the ternary complex $MgCl_2\cdot 2SbCl_3\cdot 6MeCN$, 215–8
Oxidation of ascorbic acid by copper(II) and the ferrocenium ion in acetonitrile–water mixtures, 733–40
Reactions of hexakis(acetonitrile)iron(II) hexafluorophosphate in acetonitrile. Ligation of ammonia, pyridine, and trimethylamine to iron(II) and the behaviour of trimethyl phosphite and trimethylphosphine towards iron(II), nitrogen donor ligand complex cations, 1309–14
Ligand substitution of $[M(SnPh_3)(MeCN)_2(CO)_2(NO)]$ (M = Cr or W) and crystal structure of $[Cr(SnPh_3)(MeCN)\{P(OMe)_3\}(CO)_2(NO)]$, 1397–400
Interaction of acetonitrilebis(cyclopentadienyl)molybdenum(II) or tris(acetonitrile)tricarbonylmolybdenum(0) in acetonitrile with tetrafluoroboric acid. *X*-ray crystal structures of $[Mo^{IV}(\eta^5\text{-}C_5H_5)_2(MeCN)(CH{=}CHMe)][BF_4]_2$, $[Mo^{IV}(\eta^5\text{-}C_5H_5)_2(PMe_3)_2][BF_4]_2$, $[Mo^0(CO)_2(MeCN)_3(\eta^3\text{-}CH_2CHNH_2)]_2BF_3$, and $[Mo^{III}{}_2(\mu\text{-}O)(MeCN)_{10}][BF_4]_4$, 1737–42

ACETYL
The solution behaviour of $[Rh_2(COMe)_2(CO)_2I_6]^{2-}$, its reactions with CO, pyridine, and methanol, and the *X*-ray structure of $[AsPh_4][Rh(COMe)(CO)(NC_5H_5)I_3]$, 489–96

ACETYLACETONATE
Role of the nature of the metal centre in the catalysed addition of β-dicarbonyls to electrophilically activated nitriles, 1213–6
Electroanalytical and spectrophotometric investigations on the metal(II)-1,2-bis(diphenylphosphino)ethane–acetylacetonate system (M = Ni, Pd, or Cu) in acetonitrile, 1425–8
Ligand-field analysis of the ion VO^{2+}: application of the angular overlap model to the electronic absorption spectrum of bis(acetylacetonato)oxovanadium(IV) in various solvents, 1665–70

ACETYLENE
Acid-catalysed additions of acetylenes to $[XPd(\mu\text{-}Ph_2PCH_2PPh_2)_2PdX]$ (X = Cl, Br, or I) to give dimetallated olefin complexes of type $[XPd(\mu\text{-}Ph_2PCH_2PPh_2)_2(\mu\text{-}HC{=}CR)PdX]$ (R = H, Ph, or C_6H_4Me-*p*), 457–60

ACETYLIDE
Conjugate addition of acetylides to complexes of type $[M(CO)_4\{(Ph_2P)_2C{=}CH_2\}]$ (M = Cr, Mo, or W): crystal structure of $[M(CO)_4\{(Ph_2P)_2C{=}CHCH{=}CHPh\}]$ formed by the base-catalysed isomerization of $[M(CO)_4\{(Ph_2P)_2CHCH_2C{\equiv}CPh\}]$, 89–92
Syntheses and reactivity of acetylide-containing clusters of Group 1B metals. Stepwise syntheses of trinuclear $[Au_2Cu(C_2Ph)_4]^-$ and pentanuclear $[Au_3Cu_2(C_2Ph)_6]^-$ and $[Au_3Ag_2(C_2Ph)_6]^-$ clusters, 2297–300

ACID
Hydrofluoric and hydrochloric acid behaviour in concentrated saline solutions, 705–10

ACIDITY
Surface acidity of the layered pyrophosphates of quadrivalent Ti, Zr, Ge, and Sn and their activity in some acid-catalysed reactions, 881–6

ACTINIDE
Kinetics of oxidation of uranium(IV) by permanganate ion in aqueous perchlorate media, 601–4
Co-ordination behaviour of dioxouranium(VI) nitrate in water–acetone mixtures, 2893–6

ACTIVITY
Hydrofluoric and hydrochloric acid behaviour in concentrated saline solutions, 705–10

ADDUCT
Synthesis and thermal properties of adducts of trimethylindium with nitrogen-containing Lewis bases, 7–12

AEROSOL
Hydrofluoric and hydrochloric acid behaviour in concentrated saline solutions, 705–10

ALCOHOL
Studies on transition-metal oxo and nitrido complexes. Part 9. Periodato and tellurato oxo-ruthenium complexes as organic oxidants. *X*-Ray crystal structure of *trans*-$NaK_3[RuO_2(HIO_6)_2]\cdot 8H_2O$, 1983–8

ALKALI METAL
Synthesis and characterization of metal-free and metal derivatives of a novel soluble crown-ether-containing phthalocyanine, 401–6
Some observations on the mechanism of passive transport, 1293–6
Synthesis and characterization of the new mixed oxides $M(VTe)O_6$ (M = K, Rb, or Cs), 2141–4
Uncommon complex stoicheiometry in solvent extraction: solution-phase dicationic complex formation of crown ethers, 2735–8

ALKANOL
Sulfur–nitrogen bonded metal chelates. Part 17. Reactions of alcohols with the co-ordinated nitrile in nickel(II) complexes $[NiL(NCR)][ClO_4]$ (L = a *S,N,N*-tridentate anion; R = Me, Et, or Ph) under different conditions, 2373–8
Ruthenium(IV)–oxo complexes: a novel hydrophobic effect of tertiary phosphine ligands on the selective oxidation of alcohols, 2385–92

ALKENE
Homogeneous deuteriation of alkenes using $[RhX(PR_3)_3]$ (X = halide, R = aryl) catalysts, 1653–6
Photochemical and photocatalytic behaviour of 'flyover-bridge' complexes, 2519–24
Organic chemistry of dinitrogen and related ligands. Part 7. *N*-Vinylation or oxidative replacement of the hydrazido(2−) ligand in reactions of $[WX(dppe)_2(NNH_2)]Y$ (dppe = $Ph_2PCH_2CH_2PPh_2$, X = F or Br, Y = BF_4 or Br) with cyanoalkenes. *X*-Ray crystal structure of $[WBr(dppe)_2\{NC(Br)C(CN)C(CN)_2\}]$, 2781–6

ALKENYL
Reactions of acetylenes with noble metal carbonyl halides. Part 11. Synthesis of $[Pt\{CMe{=}C(H)COOMe\}(CO)Cl]$ *via* polynuclear platinum carbonyls. *X*-Ray crystal structure determination of the σ-alkenyl platinum complex $[N(PPh_3)_2][Pt\{CMe{=}C(H)CO_2Me\}(CO)Cl_2]$, 1949–56

ALKOXIDE
Synthesis and structural studies of dimethylindium(III) complexes with polydentate nitrogen donor ligands, and of monomethylindium(III) complexes containing alkoxide-bridged binuclear cations, 35–46
Dicopper(II) complexes of a binucleating N_4 macrocycle containing mono- and di-atomic bridges; magnetic interactions mediated by alkoxo- and diaza-bridging ligands. Crystal structures of $[Cu_2(L^1)(pz)_2][ClO_4]_2$, $[Cu_2(L^1)(OEt)_2(NCS)_2]$, and

ALKOXIDE (contd)
$[Cu_2(L^1)(OMe)_2(MeCN)_2][BPh_4]_2$, 2995–3004
ALKYL
triangulo-Trirhenium(III) alkyl compounds. The *X*-ray crystal structures of $Re_3(\mu\text{-}Cl)_{1.5}(\mu\text{-}Me)_{1.5}(CH_2Ph)_6$ and $Re_3(\mu\text{-}Me)_3(CH_2Ph)_6$, 219–26
Some sterically hindered lithium alkylbromo- and alkylchloromagnesates, -cadmates, and -manganates. Crystal and molecular structures of $[Li(thf)_2(\mu\text{-}Br)_2Mg\{C(SiMe_3)_3\}(thf)]$, $[Li(thf)_4][\{Cd[SiMe_3)_3]\}_3(\mu\text{-}Br)_3(\mu_3\text{-}Br)]\cdot 0.5C_6H_{12}$, $[\{Li(thf)\}_3(\mu_3\text{-}Br)_3(\mu_3\text{-}OSiMe_3)Cd\{C(SiMe_3)_3\}]$, and $[Li(thf)_4][\{Mn[C(SiMe_3)_3]\}_3(\mu\text{-}Cl)_4(thf)]$ (thf = tetrahydrofuran), 381–92
Addition of halogens to $[\{Au(CH_2)_2PPh_2\}_2RX]$ complexes. The structures of *cis,trans*-$[\{Au(CH_2)_2PPh_2\}_2(CH_2CF_3)Br_3]$ and *trans,trans*-$[\{Au(CH_2)_2PPh_2\}_2(CHCl_2)Br_2Cl]$, 2669–74
Preparation of carbonyl, halogeno, and alkyl niobocene complexes and their reactions with oxygen. Crystal structures of $[Nb(\eta\text{-}C_5H_4SiMe_3)_2Cl_2]$, $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(O)Me]$ and $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(C_6F_5)(CO)]$, 2685–94
Synthesis, *X*-ray structure, and reactivity with Lewis acids of metallacyclopentane derivatives of rhodium(III) and iridium(III). Observation of the first boron trifluoride-promoted C–H bond activation in transition metal alkyls, 2983–94
ALKYLIDENE
Syntheses of vinylidene-bridged A-frame palladium complexes containing $Ph_2PCH_2PPh_2$ or $Ph_2PCHMePPh_2$: protonation to give carbyne-bridged complexes, 1179–84
ALKYLIDYNE
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 69. Reactions of $[MoW(\equiv CC_6H_4Me\text{-}4)(CO)_7(\eta\text{-}C_5H_5)]$ with but-2-ene; crystal structures of $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)\}(CO)_3(\eta\text{-}MeC_2Me)_2(\eta\text{-}C_5H_5)]$ and $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(=CH_2)C(H)MeC(O)\}(CO)_6(\eta\text{-}C_5H_5)]\cdot 0.5CH_2Cl_2$, 207–14
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 70. Tetranuclear metal compounds with rhenium–molybdenum or –tungsten bonds. Crystal structures of $[Mo_2Re_2(\mu_3\text{-}CC_6H_4Me\text{-}4)_2(\mu\text{-}CO)_2(CO)_7(\eta\text{-}C_5H_5)_2]\cdot 1.5CH_2Cl_2$ and $[W_2Re_2(\mu\text{-}H)(\mu_3\text{-}\sigma\text{:}\sigma'\text{:}\eta^2\text{-}C{=}CH_2)(\mu_3\text{-}CMe)(\mu\text{-}CO)(CO)_8(\eta\text{-}C_5H_5)_2]$, 1121–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 71. Synthesis of tungsten–iridium complexes crystal structures of $[W_2Ir(\mu_3\text{-}RC_2R)Cl(CO)_4(\eta\text{-}C_5H_5)_2]\cdot CH_2Cl_2$ and $[W_2Ir(\mu\text{-}CR)(\mu_3\text{-}CR)Cl(CO)_4(\eta\text{-}C_5H_5)_2]$ (R = C_6H_4Me-4), 1131–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 72. Di- and tri-metal compounds prepared from the alkylidyne tungsten complexes $[W(\equiv CR)(CO)_3\{H_2B(pz)_2\}]$[R = C_6H_4Me-4 or Me, $H_2B(pz)_2$ = dihydrobis(pyrazol-1-yl)borate], 1139–46
Syntheses of vinylidene-bridged A-frame palladium complexes containing $Ph_2PCH_2PPh_2$ or $Ph_2PCHMePPh_2$: protonation to give carbyne-bridged complexes, 1179–84
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$, 1867–78
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 74. Salts of the anions $[W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]^-$ (R = C_6H_4Me-2 or $C_6H_3Me_2$-2,6) as reagents for the synthesis of compounds with heteronuclear metal–metal bonds: crystal structure of $[NEt_4][FeW(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta^5\text{-}C_2B_9H_9Me_2)]$, 1879–90
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 75. Reactions of octacarbonyldicobalt with the salts $[X][W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$ (X = NEt_4 or PPh_4; R = Me, Ph, C_6H_4Me-2, or C_6H_4Me-4); crystal structure of $[PPh_4][Co_2W(\mu_3\text{-}CPh)(CO)_8(\eta^5\text{-}C_2B_9H_9Me_2)]\cdot 0.5CH_2Cl_2$, 1891–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4), 1899–906
Synthesis of new heteronuclear complexes with bridging carbyne ligands between tungsten and gold. *X*-Ray crystal structure of $[AuW(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_2(bipy)(C_6F_5)Br]$, 1957–62
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 79. Synthesis and reactions of the alkylidynemetal complexes $[M(\equiv CR)(CO)_2(\eta\text{-}C_5H_5)]$ (R = $C_6H_3Me_2$-2,6, M = Cr, Mo, or W; R = C_6H_4Me-2, C_6H_4OMe-2, or $C_6H_4NMe_2$-4, M = Mo); crystal structure of the compound $[MoFe(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta\text{-}C_5H_5)]$, 2453–66
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 80. Mixed-metal tungsten and ruthenium compounds, 2467–74
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$ **(1988, 1867)**, 2683
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4) **(1988, 1899)**, 2683
Reconsideration of the crystal structure refinement of the complex $[PPh_4][W(\equiv CC_6H_4Me\text{-}4)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$, 2903–4
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 81. Reactions of the compound $[Fe_2(\mu\text{-}CH_2)(CO)_8]$ with alkylidyne–molybdenum and –tungsten complexes. Reactivity of the product $[WFe\{\mu\text{-}\sigma\text{:}\eta\text{-}CH{=}CH(C_6H_4Me\text{-}4)\}(CO)_6(\eta\text{-}C_5H_5)]$, and crystal structures of the species $[W_2Fe(\mu_3\text{-}CC_6H_4Me\text{-}4)\{\mu\text{-}\sigma\text{:}\eta\text{-}C(C_6H_4Me\text{-}4){=}CH_2\}(CO)_6(\eta\text{-}C_5H_5)_2]$ and $[WFe\{\mu\text{-}C(Et)C(Et)C(H)CH(C_6H_4Me\text{-}4)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$, 3017–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 82. Dimetallic compounds prepared from the complexes $[MR_2(\eta\text{-}C_5H_5)_2]$ (R = Cl or Bu^n, M = Ti or Zr), 3031–4
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 83. Molybdenum and tungsten complexes containing the alkylidyne group $C\{\eta^6\text{-}C_6H_4(OMe\text{-}2)Cr(CO)_3\}$, 3035–40
ALKYNE
Cyclo-oligomerisation reactions of bis(alkyne) and η^2-vinyl complexes of molybdenum and tungsten with t-butyl isocyanide leading to iminocyclopentadiene derivatives, 27–34
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 69. Reactions of $[MoW(\equiv CC_6H_4Me\text{-}4)(CO)_7(\eta\text{-}C_5H_5)]$ with but-2-ene; crystal structures of $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)\}(CO)_3(\eta\text{-}MeC_2Me)_2(\eta\text{-}C_5H_5)]$ and $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(=CH_2)C(H)MeC(O)\}(CO)_6(\eta\text{-}C_5H_5)]\cdot 0.5CH_2Cl_2$, 207–14
Organo–platinum–iron complexes containing one bridging $Ph_2PCH_2PPh_2$ ligand. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CO)Pt(PPh_3)]$, $[(OC)_2Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)C_2H_2\}Pt(PPh_3)]$, and $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CMe{=}CH_2)\text{-}Pt(PPh_3)][BF_4]$, 741–50
Facile carbon–carbon bond formation on a triosmium cluster: crystal structures of $[Os_3(CO)_8\{C(Me)C(Me)C(O)C(Me)C(Me)C(Ph)C(Ph)\}]$ and $[Os_3(CO)_8\{P(OMe)_3\}\{C(Me)C(Me)C(O)C(Me)C(Me)\}]$, 1421–4
Reactions of co-ordinated ligands. Part 43. Alkyne linking reactions at dimetal centres. Synthesis and structures of $[Mo_2\{\mu\text{-}(\sigma,\eta^3\text{:}\eta^2\text{:}\eta^3,\sigma\text{-}C_8H_4Bu^t_4)\}(\eta\text{-}C_5H_5)_2]$, $[Mo_2\{\mu\text{-}(\sigma,\eta^3\text{:}\eta^3,\sigma\text{-}CH{=}CHBu^tC_6H_2Bu^t_3)\}(\eta\text{-}C_5H_5)_2]$, and $[FeMo(CO)_2(C_4Me_2Ph_2)(\eta\text{-}C_5H_5)_2]$, 1843–52
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$, 1867–78
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4), 1899–906
Reactions of acetylenes with noble metal carbonyl halides. Part 11. Synthesis of $[Pt\{CMe{=}C(H)COOMe\}(CO)Cl]$ *via* polynuclear platinum carbonyls. *X*-Ray crystal structure determination of the σ-alkenyl platinum complex $[N(PPh_3)_2][Pt\{CMe{=}C(H)CO_2Me\}(CO)Cl_2]$, 1949–56
Synthesis and dynamic nuclear magnetic resonance studies of co-

ALKYNE (contd)
ordinatively unsaturated alkyne complexes of tungsten(II), 2071–6
Reactivity of cyclopalladated compounds. Part 18. Compared reactivity of the Pd–C bonds of two closely related six-membered palladocyclic rings with substituted alkynes. *X*-Ray and *molecular structures of* [Pd{C(Ph)=C(R)C(Ph)=C(R)(*o*-C_6H_4N=CMeNHPh)}Cl] (R = CO_2Et) and [Pd{C(R)[C(CO_2Me)C(R)=C(R)C(R)=C(R)][*o*-C_6H_4N=CMe(OH)]}Cl] (R = CO_2Me), 2421–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron–molybdenum compounds with alkynes; crystal structures of [MoFe{μ-C(C_6H_4Me-4)C(CHMe)CH_2C(Me)C(Me)}($CO)_4$(η-C_5H_5)], [MoFe{μ-C(C_6H_4Me-4)C(CHMe)CH_2}($CO)_5$(η-C_5H_5)], and [MoFe{μ-C(C_6H_4Me-4)C(CH_2PMe_3)CHMe}($CO)_5$(η-C_5H_5)], 2431–42
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 78. Reactions of [MoFe(μ-CC_6H_4Me-4)($CO)_6$(η-C_5H_5)] with alkynes; crystal structures of [MoFe{μ-C(C_6H_4Me-4)C(O)C(Et)C(Et)}(μ-CO)-($CO)_4$(η-C_5H_5)] and [MoFe{μ-C(C_6H_4Me-4)C(Me)C[C(O)Me]}($CO)_5$(η-C_5H_5)], 2443–52
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 80. Mixed-metal tungsten and ruthenium compounds, 2467–74
The oxidation of alkyne-bridged dimolybdenum complexes, 2509–12
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of [WCo(≡CR)($CO)_8$] (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of [WCo{μ-C(C_6H_4Me-4)C(Me)C(Me)C(O)}($CO)_6$(PPh_3)] and [WCo{μ-C(Ph)C(Me)C(Me)C(OH)}($CO)_6$(PPh_3)][BF_4] **(1988, 1867)**, 2683
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes [WCo(≡CR)($CO)_8$] (R = Me or C_6H_4Me-4) **(1988, 1899)**, 2683
Co-ordinatively unsaturated alkyne complexes of tungsten: synthesis and dynamic nuclear magnetic resonance studies of some but-2-yne derivatives, 2855–64
Dinuclear allyl and μ-vinyl complexes from the reactions of a μ-hydrido dimanganese and a μ-hydrido manganese–molybdenum complex with alkynes containing α-methyl or α-methylene substituents, 2953–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron–molybdenum compounds with alkynes; crystal structures of [MoFe{μ-C(C_6H_4Me-4)C(CHMe)CH_2C(Me)C(Me)}($CO)_4$(η-C_5H_5)], [MoFe{μ-C(C_6H_4Me-4)C(CHMe)CH_2}($CO)_5$(η-C_5H_5)], and [MoFe{μ-C(C_6H_4Me-4)C(CH_2PMe_3)CHMe}($CO)_5$(η-C_5H_5)] **(1988, 2431)**, 3063

ALKYNYL
Structural comparison of cluster compounds containing an edge-bridging M(PPh_3) (M = Cu, Ag, or Au) fragment. *X*-Ray crystal structure of [$AgRu_3(CO)_9(C_2Bu^t)(PPh_3)$], 2889–92

ALLENE
Organo–platinum–iron complexes derived from allenes. Crystal structures of [$(OC)_3$Fe(μ-dppm){μ-C(O)CH_2C(=CH_2)}Pt(PPh_3)], [$(OC)_3$Fe(μ-dppm){μ-C(=CH_2)CH_2}Pt(PPh_3)], and [$(OC)_2$Fe(μ-dppm){η^4-(CH_2)(CMe_2)CPt(PPh_3)}], 1185–92

ALLYL
Dinuclear allyl and μ-vinyl complexes from the reactions of a μ-hydrido dimanganese and a μ-hydrido manganese–molybdenum complex with alkynes containing α-methyl or α-methylene substituents, 2953–8
Synthesis, *X*-ray structure, and reactivity with Lewis acids of metallacyclopentane derivatives of rhodium(III) and iridium(III). Observation of the first boron trifluoride-promoted C–H bond activation in transition metal alkyls, 2983–94

ALLYLATION
Allylation of cobalt-co-ordinated cyclo-octatetraene by the [Fe{$P(OMe)_3$}($NO)_2$(η^3-allyl)]$^+$ cation: ring closure to 1,2,3,3a-tetrahydropentalenyl derivatives and the *X*-ray structure of [Co(η^5-C_8H_8R)(η-C_5Me_5)][PF_6] [R = $CH_2C(Me)=CH_2$], 1631–6

ALUMINIUM
Multinuclear magnetic resonance studies of the hydrolysis of aluminium(III). Part 8. Base hydrolysis monitored at very high magnetic field, 1347–56
Adducts of trimethylaluminium with phosphine ligands; electronic and steric effects, 3047–50

ALUMINIUM-27
Multinuclear magnetic resonance studies of the hydrolysis of aluminium(III). Part 8. Base hydrolysis monitored at very high magnetic field, 1347–56

AMALGAM
A new approach to measurement of the donor strength and co-ordination chemistry of various solvents by oxidation of metal amalgam electrodes in dichloromethane, 2379–84

AMIDE
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 421–6
Synthesis and crystal structure of tris[bis(trimethylsilyl)amido]oxoniobium(V): a four-co-ordinated oxo niobium precursor, 533–6
Syntheses and solid-state structures of trimeric dibenzylamidolithium and its diethyl ether and hexamethylphosphoramide dimeric complexes: an explanation of these structures and evidence for Li···CH interactions in both solid and solution phases, 617–28
Synthesis and structural studies of [2-(6-methyl)pyridyl]- and (8-quinolyl)-trimethylsilylamido-lithium complexes, 1011–20
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution **(1988, 421)**, 1107
Copper(II)-assisted hydrolysis of 2,4,6-tris(2-pyridyl)-1,3,5-triazine. Part 1. Crystal structures of [bis(2-pyridylcarbonyl)amido](2-pyridylformamide)copper(II) perchlorate monohydrate and [bis(2-pyridylcarbonyl)amido]copper(II) perchlorate, 2033–40
Ligand-field traces in three- and five-co-ordinated transition-metal(III) complexes, 2201–10
Diphenylphosphido complexes of the lanthanides: reactions of compounds [Ln{$N(SiMe_3)_2$}$_3$] (Ln = La or Eu) or [Ln{$N(SiMe_3)_2$}$_3$(Ph_3PO)] (Ln = La, Eu, or Y) with Ph_2PH to give [Ln{$N(SiMe_3)_2$}$_2$(PPh_2)] or [Ln{$N(SiMe_3)_2$}$_2$(PPh_2)(Ph_3PO)], 2211–4
Synthesis and oxidation reactions of mono- and di-nuclear rhodium carbonyl complexes of (*o*-diphenylphosphino-phenyl)amine, H_2L; *X*-ray structure analysis of a rhodium(II) amido-bridged dimer, [{Rh(μ-HL)(CO)Cl}$_2$]·EtOH, 2287–92
Organic chemistry of dinitrogen and related ligands. Part 7. *N*-Vinylation or oxidative replacement of the hydrazido(2−) ligand in reactions of [WX(dppe)$_2$(NNH_2)]Y (dppe = $Ph_2PCH_2CH_2PPh_2$, X = F or Br, Y = BF_4 or Br) with cyanoalkenes. *X*-Ray crystal structure of [WBr(dppe)$_2$}{NC(Br)C(CN)C(CN)$_2$}], 2781–6

AMINE
Calorimetric study on oxygen addition to cobalt(II) complexes with tris(2-aminoethyl)amine and 3,7-diazanonane-1,9-diamine, 373–80
Solvent effects on the protonation constants of *N,N'*-bis(2-carbamoylethyl)ethylenediamine and the equilibrium constants for its copper(II) complexes in methanol–water mixtures, 541–4
Unusual changes in hyperfine coupling constants observed for copper(II) complexes with *N,N*-bis(benzimidazol-2-ylmethyl)amine and its homologues; *X*-ray crystal structure determinations of [$CuL^{Pr}(NO_3)$(MeOH)]NO_3, [CuL^{Bu}-(NO_3)(MeOH)]NO_3, [$CuL^{Bu}(NO_3)$]NO_3, and [$CuL^{Bu}(NO_3)$]NO_3, 691–700
Amine, imine, and aminocarbene complexes of platinum(II), 1147–52
Reactions of hexakis(acetonitrile)iron(II) hexafluorophosphate in acetonitrile. Ligation of ammonia, pyridine, and trimethylamine to iron(II) and the behaviour of trimethyl phosphite and trimethylphosphine towards iron(II), nitrogen donor ligand complex cations, 1309–14
A kinetic investigation on the oxidation of platinum(II) complexes by hexachloroiridate(IV). Role of steric hindrance, 1577–82
Equilibrium measurements for silver(I) complexes with polyamines in dimethyl sulphoxide, 1781–4
Zinc(II) complexes of dipropylenetriamine and *N*-(2-

AMINE (contd)
aminoethyl)propane-1,3-diamine: a carbon-13 nuclear magnetic resonance study, 1989–98
Ligand-field traces in three- and five-co-ordinated transition-metal(III) complexes, 2201–10
Thermodynamic and kinetic studies on the complexation reactions of copper(II) with *NN'*-bis(β-carbamoylethyl)-*trans*-cyclohexane-1,2-diamine, 2495–500
Co-ordination kinetics of some aliphatic amines towards the photogenerated transient '$CoH\{PPh(OEt)_2\}_3$', 2675–6
Nucleophilic (Michael) additions to $(Ph_2P)_2C{=}CH_2$ when chelated to dimethylplatinum(II), di(*o*-tolyl)platinum(II), or iodo(trimethyl)platinum(IV). Crystal structure of $[PtMe_3I\{(PPh_2)CH(PPh_2)CH_2NHCH_2Ph\}]$, 3011–6
AMINO ACID
Kinetics and mechanism of oxidation of β-phenylalanine by permanganate ion in aqueous perchloric acid, 605–10
A potentiometric and spectroscopic study of the interaction of angiotensin II and some of its peptide fragments with copper(II), 887–94
Co-ordination behaviour of *N*-protected aspartic acid in binary and ternary copper(II) complexes. Crystal and molecular structure of [*N*-acetyl-L-aspartato(2−)-*O*]bis(2,2'-bipyridine)copper(II)-ethanol tetrahydrate, 909–12
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution, 943–6
Possible biological activity in proton, metal, and aminohydroxamic acid equilibria. Protonation and complex formation reactions between *N*-hydroxy-D-asparagine and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 953–60
Thermodynamic and spectrophotometric study of copper(II) and cadmium(II) homo- and hetero-nuclear complexes with L-histidylglycine in an aqueous medium, 1115–20
Mixed metal complexes in solution. Part 5. Equilibrium and conformational study of heterobinuclear metal(II) isoserine complexes in aqueous solution, 1267–72
Thermodynamic and spectroscopic studies on the protonation and Cu^{2+} complex formation of a synthetic amino diacid: (3-aminopropyl)malonic acid, 1273–80
Zinc(II) complexes of dipropylenetriamine and *N*-(2-aminoethyl)propane-1,3-diamine: a carbon-13 nuclear magnetic resonance study, 1989–98
Anaerobic oxidation of cysteine to cystine by iron(III). Part 2. The reaction in basic solution, 2109–12
Complex equilibria in aqueous solutions of Ti^{3+}–glycine and –malonic acid, 2231–4
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution (**1988, 943**), 2243
AMINOBENZOATE
Crystal and molecular structure of 1,2;3,4-di-μ-*o*-aminobenzoato-*OO'*-1,3-bis(*o*-aminobenzoato-*O*)-1,2,4;2,3,4-di-μ_3-oxo-tetrakis[di-n-butyltin(IV)], 1719–24
AMINOCARBENE
Amine, imine, and aminocarbene complexes of platinum(II), 1147–52
AMINOPIPERIDINE
Preparation, molecular structure, and stereochemical properties of copper(II) complexes co-ordinated to (3*S*)- and (*RS*)-3-aminopiperidine: effect of ring size on stereochromism, 1543–8
AMMINE
Ruthenium-99 Mössbauer study of ruthenium red and its derivatives, 1679–82
Kinetics of the displacement of cyclobutane-1,1-dicarboxylate from diammine(cyclobutane-1,1-dicarboxylato)-platinum(II) in aqueous solution, 2135–40
AMMONIUM
The thermochemistry of ammonium compounds and the energy barrier opposing ammonium ion reorientation, 445–50
ANAEMIA
A potential iron pharmaceutical composition for the treatment of iron-deficiency anaemia. The crystal and molecular structure of *mer*-tris-(3-hydroxy-2-methyl-4*H*-pyran-4-onato)iron(III), 1159–64
ANATION
Kinetic studies of the complexation of oxalate to hexa-aquairidium(III), 711–6
ANGIOTENSIN
A potentiometric and spectroscopic study of the interaction of angiotensin II and some of its peptide fragments with copper(II), 887–94
ANTIMONY
X-Ray crystal structure identification of the ternary complex $MgCl_2{\cdot}2SbCl_3{\cdot}6MeCN$, 215–8
An investigation of the titanium–antimony–oxygen system by *X*-ray diffraction, antimony-121 Mössbauer spectroscopy, and temperature-programmed reduction, 2161–6
Antimony-doped rutile titanium(IV) oxide, 2167–70
Crystal and molecular structure, and spectroscopic characterization of tetrakis(2-amino-1,3,4-thiadiazolium) hexadecabromotetra-antimonate(III), 2501–4
ANTIMONY-121
An investigation of the titanium–antimony–oxygen system by *X*-ray diffraction, antimony-121 Mössbauer spectroscopy, and temperature-programmed reduction, 2161–6
Antimony-doped rutile titanium(IV) oxide, 2167–70
ANTIPYRINE
Temperature study of the solution conformations of aqueous lanthanide(III) complexes containing monodentate ligands, 2315–22
AQUATION
Trifluoromethanesulphonato-*O* complexes of platinum(II) and palladium(II), 931–4
ARENE
Synthesis of the arene complex $[\{RuCl_2(\eta^6\text{-}o\text{-}MeC_6H_4CO_2Me)\}_2]$ and separation of its diastereomeric (−)(*S*)-1-phenylethylamine adducts, 315–20
Mechanism of the reaction of $[Mo(\eta\text{-}C_6H_6)(Me_2PCH_2CH_2PMe_2)(\eta\text{-}C_2H_4)H]^+$ with PMe_3 giving $[Mo(\eta\text{-}C_6H_5Et)(dmpe)(PMe_3)H]^+$: metal-to-ring migration of an ethyl group, 557–78
Oxidation and reduction chemistry of bis(η-arene)niobium compounds; the *X*-ray crystal structure of bis(η-toluene)(trimethylphosphine)niobium tetrafluoroborate, 1475–8
Studies on olefin-co-ordinating transition metal carbene complexes. Part 12. Novel synthesis and structural characterization of (η^6-arene)dicarbonyliron complexes, and their oxidation products, 2803–8
ARSENATE
The complexation of iron(III) with sulphate, phosphate, or arsenate ion in sodium nitrate medium at 25 °C, 2015–22
ARSENIC
Synthesis and characterization of Ti_5Te_4-type molybdenum cluster compounds, $A_xMo_5As_4$ (A = Cu, Al, or Ga), 1–6
Ionization energies and thermal fragmentation patterns of gaseous cyclopoly-arsanes and -phosphanes E_nR_n (E = As or P; R = Me, Bu^t, or CF_3; *n* = 3—5): a joint temperature-variable field ionization mass spectrometric and ultraviolet photoelectron spectroscopic study, 195–200
The molecular structure of gaseous trimethylarsenic difluoride as determined by electron diffraction, 451–6
Reaction of manganese(II) arsine oxide complexes with sulphur dioxide: some unexpected products. The *X*-ray crystal structure of $[(Ph_3AsO)_2H]I_3$, 1095–8
Reinvestigation of the synthesis of tris[benzoyl(thiobenzoyl)methanato-*S*]arsenic(III): synthesis and *X*-ray structure of 3,3'-thiodi(1,3-diphenylprop-2-en-1-one), 1289–92
ARSINE
Reactions of phosphine, arsine, and stibine with carbonylbis(triethylphosphine)iridium(I) halides. Part 2. Reactions in dichloromethane, 477–84
The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)\{\mu\text{-}Ph_2E(CH_2)_nE'Ph_2\}(CO)_{12}]$ (*n* = 1 or 2, E = E' = As or E = As, E' = P; *n* = 2, E = E' = P). *X*-Ray crystal structure of $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)(\mu\text{-}Ph_2AsCH_2PPh_2)(CO)_{12}]$, 1795–802
Indium(III) halide complexes with trimethylphosphine sulphide and trimethylarsine sulphide: structures and bonding of $[InX_3(Me_3MS)_2]$ (X = Cl or Br, M = P or As) and $[InCl_3(H_2O)(Me_3AsS)_2]$, 2187–92
ARYL
Synthesis and reactions of d^0 imido aryl derivatives of chromium, molybdenum, and tungsten. Crystal structures of $Cr(NBu^t)_2(C_6H_2Me_3\text{-}2,4,6)_2$, $Mo(NBu^t)_2(C_6H_3Me_2\text{-}2,6)_2$, and $Cr(NBu^t)_2[C(C_6H_2Me_3\text{-}2,4,6){=}NBu^t](C_6H_2Me_3\text{-}2,4,6)$, 53–60
Synthesis of benzyl- or pentafluorobenzyl-

ARYL (contd)
diphenylphosphonio(diphenylphosphino)methanide complexes of gold(I) and gold(III) and their use as C-donor ligands, 155–8
Synthesis of homoleptic tetrahedral aryls of rhenium(IV) and ruthenium(IV). *X*-Ray crystal structures of tetrakis(*o*-methylphenyl)rhenium(IV) tetrakis(*o*-methylphenyl)oxorhenium(VI), and tetrakis(*o*-methylphenyl)ruthenium(IV), 669–74
Hydrido-organometallic complexes of platinum(II). *X*-Ray crystal structure of *trans*-[PtH(C_6H_4F-*p*)(PPh_3)$_2$], 1617–22
ASCORBIC ACID
Oxidation of ascorbic acid by copper(II) and the ferrocenium ion in acetonitrile–water mixtures, 733–40
ASPARAGINE
Possible biological activity in proton, metal, and aminohydroxamic acid equilibria. Protonation and complex formation reactions between *N*-hydroxy-D-asparagine and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 953–60
ASPARTATE
Co-ordination behaviour of *N*-protected aspartic acid in binary and ternary copper(II) complexes. Crystal and molecular structure of [*N*-acetyl-L-aspartato(2−)-*O*]bis(2,2′-bipyridine)copper(II)-ethanol tetrahydrate, 909–12
AZATHIENYL
Solid-state structures of platinum–sulphur–nitrogen stacking compounds: [Pt(S_2N_2)(PMe_2Ph)$_2$], [Pt(S_2N_2H)(PMe_2Ph)$_2$]Cl, [Pt(S_2N_2H)(PMe_2Ph)$_2$]PF_6, and [Pd(S_2N_2H)(PMe_2Ph)$_2$]BF_4, 803–8
Oxidative addition of halogens to [Pt(S_2N_2H)(PR_3)$_2$]BF_4. *X*-Ray crystal structures of [Pt(S_2N_2H)X(PMe_2Ph)] (X = Br or I) and the monoclinic and triclinic polymorphs of [Pt(S_2N_2H)Br_2(PMe_2Ph)$_2$]BF_4, 1569–76
AZIDE
Studies on ruthenium(II) macrocyclic amine complexes. Synthesis and *X*-ray structure of the (*R*,*S*,*R*,*R*) isomer of *trans*-[Ru^{II}(L)(N_3)(NCMe)]PF_6 (L = 1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecane), 239–42
Kinetics of the oxidation of hydrogen azide (hydrazoic acid) by bis(2,2′-bipyridine)manganese(III) ions in aqueous perchlorate media, 1331–6
Synthesis and characterization of diazido–germanium(IV) and -tin(IV) porphyrins. Crystal structure of diazido(5,10,15,20-tetra-*p*-tolylporphyrinato)germanium(IV), 1921–6
AZOBENZENE
Synthesis and characterisation of binuclear cyclopalladated *p*-alkoxyphenylazo complexes: preparation of new mesogenic materials, 1565–8
AZOLATE
Synthesis and hydroformylation reaction of dinuclear rhodium(I) complexes with mixed bridging ligands. *X*-Ray structure of [Rh_2(μ-pz)(μ-SBu^t)(CO)$_2${P(OMe)$_3$}$_2$], 1523–8
BENZALDEHYDE
Reactivity of *o*-diphenylphosphinobenzaldehyde toward [Pt(C_2H_4)(PPh_3)$_2$]. *X*-Ray structure of [Pt($OCC_6H_4PPh_2$-*o*)H(PPh_3)]·C_6H_6, 1833–6
BENZENEDIOLATE
Complexes of osmium, uranium, molybdenum, and tungsten with the catechol amines adrenaline, noradrenaline, dopamine, dopa, and isoproterenol, 1817–22
BENZIMIDAZOLE
Structurally diversified neutral copper(I) isocyanide complexes: mono- and bi-nuclear complexes from the reaction of copper(I) halides with *p*-tolyl isocyanide, 1599–606
BENZIMIDAZOLYL
Unusual changes in hyperfine coupling constants observed for copper(II) complexes with *N*,*N*-bis(benzimidazol-2-ylmethyl)amine and its homologues; *X*-ray crystal structure determinations of [$CuL^{Pr^i}(NO_3)$(MeOH)]NO_3, [CuL^{Bu^t}-(NO_3)(MeOH)]NO_3, [$CuL^{Bu^n}(NO_3)$]NO_3, and [$CuL^{Bu^t}(NO_3)$]NO_3, 691–700
Copper(II) and zinc(II) co-ordination compounds of tridentate bis(benzimidazole)pyridine ligands. Crystal and molecular structures of bis[2,6-bis(1′-methylbenzimidazol-2′-yl)pyridine]copper(II) diperchlorate monohydrate and (acetonitrile)[2,6-bis(benzimidazol-2′-yl)pyridine](perchlorato)copper(II) perchlorate, 1429–36
BENZOATE
Synthesis, structure, and spectroscopic and magnetic properties of *catena*-μ-aqua-diaquabis(2,6-dimethoxybenzoato)metal(II) monohydrate complexes of manganese, cobalt, nickel, and zinc. *X*-Ray crystal structure of [Co(dmba)$_2$(H_2O)$_3$]·H_2O, 363–8
Organotin biocides. Part 11. Triphenyltin benzoates: electronic *versus* steric control of structure, 1259–66
BENZOQUINONE OXIMATE
Studies on metal complexes of *ortho*-quinone mono-oximes. Part 6. Redox behaviour of bis(4-chloro-1,2-benzoquinone 2-oximato)-copper(II) and -nickel(II); synthesis and characterization of reduced species containing a paramagnetic ligand, 1497–500
BENZYLIDENEACETONE
Selective hydrogenation of PhCH=CHCOMe to the unsaturated alcohol catalysed by [$IrH_3(PR_3)_3$] (R = alkyl or aryl), 947–52
BIGUANIDE
Mechanism of reactions of some N^1-substituted biguanides with chromium(VI) in aqueous sulphuric acid media, 1557–60
BINAPHTHYL
Axially asymmetric metal alkyls. Part 6. Lithiation of 2,2′-dimethyl-1,1′-binaphthyl and its trimethylsilylated compounds, and of 2,2′,6,6′-tetramethyl-1,1′-biphenyl (asymmetric induction): *X*-ray crystal structures of monomeric [{Li($Me_2NCH_2CH_2NMe_2$)}$_2${(2-$CH_2C_{10}H_6$)$_2$}] and [Li{($Me_2NCH_2CH_2$)$_2$NMe}{2-CH_2-6-$Me(C_6H_3)_2$-2′,6′-Me_2}], 2403–10
BIPHENYL
Axially asymmetric metal alkyls. Part 6. Lithiation of 2,2′-dimethyl-1,1′-binaphthyl and its trimethylsilylated compounds, and of 2,2′,6,6′-tetramethyl-1,1′-biphenyl (asymmetric induction): *X*-ray crystal structures of monomeric [{Li($Me_2NCH_2CH_2NMe_2$)}$_2${(2-$CH_2C_{10}H_6$)$_2$}] and [Li{($Me_2NCH_2CH_2$)$_2$NMe}{2-CH_2-6-$Me(C_6H_3)_2$-2′,6′-Me_2}], 2403–10
BIPYRIDINE
Covalent bonding and spin density in *cis*-[Fe(bipy)$_2$$Cl_2$][$FeCl_4$] (bipy = 2,2′-bipyridyl) studied by polarised neutron diffraction, 117–22
A model for the interpretation of the absorption and circular dichroism spectra of tris(di-imine) complexes of iron(II) and ruthenium(II), 393–400
A novel co-ordination mode for the squarate ligand [dihydroxycyclobutenedionate(2−)]: synthesis, crystal structure, and magnetic properties of *catena*-diaqua(2,2′-bipyridyl)-μ-(squarato-O^1,O^2)-nickel(II) dihydrate, 587–90
Pillar chemistry. Part 4. Palladium(II)–2,2′-bipyridyl, –1,10-phenanthroline, and –2,9-dimethyl-1,10-phenanthroline complex pillars in α-zirconium phosphate, 851–8
Co-ordination behaviour of *N*-protected aspartic acid in binary and ternary copper(II) complexes. Crystal and molecular structure of [*N*-acetyl-L-aspartato(2−)-*O*]bis(2,2′-bipyridine)copper(II)-ethanol tetrahydrate, 909–12
Kinetics of the oxidation of hydrogen azide (hydrazoic acid) by bis(2,2′-bipyridine)manganese(III) ions in aqueous perchlorate media, 1331–6
cis-Bis(2,2′-bipyridine)bis(pyridine)ruthenium(II) salts: a spectroscopic and structural study, 1837–42
Synthesis and structural study of (2,2′-bipyridine)perchlorato(styrene)copper(I), 1907–10
Heterocyclic *N*-oxide ligands: a thermochemical study of adducts with zinc, cadmium, and mercury chlorides, 2113–6
BIPYRIMIDINE
X-Ray crystal structure of (2,2′-bipyrimidine)[1,2-dicyanoethylene-1,2-dithiolato(2−)]platinum(II)–*N*,*N*-dimethylformamide and properties of PtS_2N_2-type complexes, 2215–20
BIQUINOLINE
Transition metal complexes of substituted 2,2′-biquinolines. Part 1. The crystal and molecular structures of [8,8′-bis(aminomethyl)-2,2′-biquinoline]dichloromanganese(II) and [8,8′-bis(aminomethyl)-2,2′-biquinoline]chlorocopper(II) chloride, 2121–6
BISMUTH
Synthesis and structural characterization of the molecular complex between bismuth trichloride and pyrene, 191–4
Synthesis and structural characterisation of some cyclopentadienyliron–bismuth complexes, 1671–8
Preparation and characterisation of mixed bismuth and ruthenium clusters; *X*-ray crystal structures of [Ru_3(μ-H)$_3$$(CO)_9$(μ$_3$-Bi)], [$Ru_3(CO)_9$(μ$_3$-Bi)$_2$], and [$Ru_4(CO)_{12}$(μ$_4$-Bi)$_2$], 2091–8
Synthetic and structural studies on organomolybdenum and organotungsten complexes containing bismuth. *X*-Ray crystal structures of [BiCl{$Mo(CO)_3$(η-C_5H_5)}$_2$] and [BiCl{$Mo(CO)_2$($CNBu^t$)(η-C_5H_5)}$_2$], 2941–52

BORANE
Bonding in clusters. Part 9. The *closo–nido* relationship; and MNDO computational study, 105–10
Boron-11 and proton nuclear magnetic resonance study of *anti*-$B_{18}H_{22}$ and its anions, *anti*-$[B_{18}H_{21}]^-$ and *anti*-$[B_{18}H_{20}]^{2-}$. The crystal and molecular structure of $[NMe_4]_2[anti\text{-}B_{18}H_{20}]$, 1785–94
BORATE
A new route to potassium and ammonium pentaborate dihydrates, $A[B_5O_6(OH)_4]\cdot 2H_2O$ (A = K or NH_4), and synthesis and structural assessment of new fluoro(hydroxo)oxoborate dihydrates, $A_2[B_2O_2F_2(OH)_2]\cdot 2H_2O$ (A = K or NH_4), 243–4
Boron-11 and proton nuclear magnetic resonance study of *anti*-$B_{18}H_{22}$ and its anions, *anti*-$[B_{18}H_{21}]^-$ and *anti*-$[B_{18}H_{20}]^{2-}$. The crystal and molecular structure of $[NMe_4]_2[anti\text{-}B_{18}H_{20}]$, 1785–94
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 74. Salts of the anions $[W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]^-$ (R = C_6H_4Me-2 or $C_6H_3Me_2$-2,6) as reagents for the synthesis of compounds with heteronuclear metal–metal bonds: crystal structure of $[NEt_4][FeW(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta^5\text{-}C_2B_9H_9Me_2)]$, 1879–90
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 75. Reactions of octacarbonyldicobalt with the salts $[X][W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$ (X = NEt_4 or PPh_4; R = Me, Ph, C_6H_4Me-2, or C_6H_4Me-4); crystal structure of $[PPh_4][Co_2W(\mu_3\text{-}CPh)(CO)_8(\eta^5\text{-}C_2B_9H_9Me_2)]\cdot 0.5CH_2Cl_2$, 1891–8
Preparation, structure, and nuclear magnetic resonance properties of the nine-vertex *nido*-rhenaborane $[(PMe_2Ph)_3H_2ReB_8H_{11}]$ and some related chemistry, 1969–82
Reconsideration of the crystal structure refinement of the complex $[PPh_4][W(\equiv CC_6H_4Me\text{-}4)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$, 2903–4
Structures of borate–aldohexose and borate–chetohexose complexes in aqueous solution. A thermodynamic study, 2971–4
BORIC ACID
The characterisation of molecular boric acid by mass spectrometry and matrix isolation infrared spectroscopy, 1645–52
BORON
Bonding in clusters. Part 9. The *closo–nido* relationship; and MNDO computational study, 105–10
A new route to potassium and ammonium pentaborate dihydrates, $A[B_5O_6(OH)_4]\cdot 2H_2O$ (A = K or NH_4), and synthesis and structural assessment of new fluoro(hydroxo)oxoborate dihydrates, $A_2[B_2O_2F_2(OH)_2]\cdot 2H_2O$ (A = K or NH_4), 243–4
Organoruthenaborane chemistry. Part 6. The reaction of $[\{Ru(\eta^6\text{-}C_6Me_6)Cl_2\}_2]$ with the *closo*-$[B_{10}H_{10}]^{2-}$ anion: characterisation of some *closo*-type eleven-vertex 1-ruthenaundecaboranes and the molecular structure of $[5\text{-}(\eta^6\text{-}C_6Me_6)\text{-}6\text{-}(OMe)\text{-}nido\text{-}5\text{-}RuB_9H_{12}]$, 925–30
Polyhedral thiaborane chemistry: a comparative nuclear magnetic resonance study of *arachno*-$[6\text{-}SB_9H_{12}]^-$ and *nido*-$6\text{-}SB_9H_{11}$, 1467–74
The characterisation of molecular boric acid by mass spectrometry and matrix isolation infrared spectroscopy, 1645–52
Boron-11 and proton nuclear magnetic resonance study of *anti*-$B_{18}H_{22}$ and its anions, *anti*-$[B_{18}H_{21}]^-$ and *anti*-$[B_{18}H_{20}]^{2-}$. The crystal and molecular structure of $[NMe_4]_2[anti\text{-}B_{18}H_{20}]$, 1785–94
Preparation, structure, and nuclear magnetic resonance properties of the nine-vertex *nido*-rhenaborane $[(PMe_2Ph)_3H_2ReB_8H_{11}]$ and some related chemistry, 1969–82
Photoelectron spectra of sulphidoborons XBS where X = H, F, Cl, or Br, 2041–6
Pentamethylcyclopentadienylrhodaborane chemistry. Part 4. The isolation, molecular structure, and nuclear magnetic resonance study of an interesting phosphino-bridged *arachno*-type nine-vertex rhodaborane $[2,5\text{-}(\mu\text{-}PPh_2)\text{-}1\text{-}(PHPh_2)\text{-}2\text{-}(\eta^5\text{-}C_5Me_5)\text{-}2\text{-}RhB_8H_9]$, 2059–64
The molecular structure of hexaborane(12) in the gas phase as determined by electron diffraction, 2335–40
Comparative metallaborane chemistry: preparation and nuclear magnetic resonance studies of some *nido*-5-metalladecaboranes of rhodium, iridium, ruthenium, and osmium, 2597–600
Metallaheteroborane chemistry. Part 4. The synthesis of *closo*-$[2,2\text{-}(PPh_3)_2\text{-}2\text{-}H\text{-}1,2\text{-}XMB_{10}H_{10}]$ (X = Se or Te, M = Rh or Ir) compounds, their characterisation by nuclear magnetic resonance techniques, and the crystal and molecular structure of the X = Te, M = Rh complex, 2739–46
Pentamethylcyclopentadienylrhodaborane chemistry. Part 5. Preparation, molecular structure, and nuclear magnetic resonance spectra of the *arachno* ten-vertex rhodadecaboranes $[6\text{-}(\eta^5\text{-}C_5Me_5)\text{-}6,9\text{-}(RNC)_2\text{-}arachno\text{-}6\text{-}RhB_9H_{11}]$ (R = Me or *p*-MeC_6H_4), 2809–16
Structures of borate–aldohexose and borate–chetohexose complexes in aqueous solution. A thermodynamic study, 2971–4
BROMAZEPAM
Discontinuous high spin $\rightleftharpoons$ low spin transition in an iron(II) complex $[FeL_2(NCS)_2]$ with the pharmaceutical agent bromazepam, 1999–2002
BROMIDE
Spectrophotometric and conductometric study of cobalt(II) bromide–dimethyl sulphoxide solutions, 369–72
Crystal and molecular structure, and spectroscopic characterization of tetrakis(2-amino-1,3,4-thiadiazolium) hexadecabromotetra-antimonate(III), 2501–4
Synthesis and characterization of the novel copper(I) anion $[Cu(PPh_3)Br_2]^-$, 2825–30
BUTANEDIONE
Kinetics and mechanisms of the reactions of nickel(II) with 4,4,4-trifluoro-1-(2-thienyl)butane-1,3-dione in aqueous solution, 905–8
BUTENEDIYL
Reactions of acetylenes with noble metal carbonyl halides. Part 10. Synthesis and *X*-ray structural characterization of a new substituted diplatina-dioxapentalene complex
$[Cl(CO)Pt\{CMe{=}C(COOMe)C(=O)\}PtCl(PPh_3)]$, 17–22
BUTYL
Crystal and molecular structure of 1,2;3,4-di-μ-*o*-aminobenzoato-*OO'*-1,3-bis(*o*-aminobenzoato-*O*)-1,2,4;2,3,4-di-μ_3-oxo-tetrakis[di-n-butyltin(IV)], 1719–24
CADMIUM
Some sterically hindered lithium alkylbromo- and alkylchloro-magnesates, -cadmates, and -manganates. Crystal and molecular structures of $[Li(thf)_2(\mu\text{-}Br)_2Mg\{C(SiMe_3)_3\}(thf)]$, $[Li(thf)_4][\{Cd[SiMe_3)_3]\}_3(\mu\text{-}Br)_3(\mu_3\text{-}Br)]\cdot 0.5C_6H_{12}$, $[\{Li(thf)\}_3(\mu_3\text{-}Br)_3(\mu_3\text{-}OSiMe_3)Cd\{C(SiMe_3)_3\}]$, and $[Li(thf)_4][\{Mn[C(SiMe_3)_3]\}_3(\mu\text{-}Cl)_4(thf)]$ (thf = tetrahydrofuran), 381–92
Thermodynamic and spectrophotometric study of copper(II) and cadmium(II) homo- and hetero-nuclear complexes with L-histidylglycine in an aqueous medium, 1115–20
Mixed metal complexes in solution. Part 5. Equilibrium and conformational study of heterobinuclear metal(II) isoserine complexes in aqueous solution, 1267–72
Heterocyclic *N*-oxide ligands: a thermochemical study of adducts with zinc, cadmium, and mercury chlorides, 2113–6
A new approach to measurement of the donor strength and co-ordination chemistry of various solvents by oxidation of metal amalgam electrodes in dichloromethane, 2379–84
CARBAMATE
Synthesis and reactivity of *N,N*-dialkylcarbamato complexes of manganese(II). Crystal and molecular structure of $[Mn_6(O_2CNEt_2)_{12}]$, a hexamer with four five-co-ordinated manganese(II) atoms, 2921–6
CARBENE
Experimental and theoretical studies of the reactions of electrophiles with cationic formyl complexes; formation of methoxy- and hydroxy-carbene complexes of ruthenium(II) and osmium(II), 1079–82
Pentamethylcyclopentadienyl molybdenum and tungsten carbene complexes. *X*-Ray crystal structures of *cis*- and *trans*-
$[MoI(CO)_2\{{=}C(CH_2)_3O\}(\eta\text{-}C_5Me_5)]$, 1449–56
CARBIDE
Mixed-metal carbido carbonyl clusters. Part 3. Synthesis and structural characterization of $[Rh_6C(CO)_{15}\{Ag(NCMe)\}_2]\cdot 0.5MeOH$, $[Rh_6C(CO)_{15}\{M(PPh_3)\}_2]$ (M = Cu, Ag, or Au), and of the anion $[Rh_6C(CO)_{15}\{Au(PPh_3)\}]^-$ as its PPh_4^+ salt, 1237–48
X-Ray crystal structures of two isomers of the hydrido–carbonyl anion $[Re_7(\mu\text{-}H)C(CO)_{21}]^{2-}$. The problematic existence of triply bridging hydrides in clusters containing interstitial main-group elements, 1281–8
Derivatives of $[Rh_6(CO)_{13}C]^{2-}$: solution structure of $[Rh_6H(CO)_{13}C]^-$ from nuclear magnetic resonance measurements and the *X*-ray crystal structure of $[Rh_6(CO)_{11}C(\mu\text{-}$

CARBIDE (contd)
$Ph_2PCH_2CH_2PPh_2)]^{2-}$, 2103–8
CARBOHYDRATE
Structures of borate–aldohexose and borate–chetohexose complexes in aqueous solution. A thermodynamic study, 2971–4
CARBON-13
The solution behaviour of $[Rh_2(COMe)_2(CO)_2I_6]^{2-}$, its reactions with CO, pyridine, and methanol, and the *X*-ray structure of $[AsPh_4][Rh(COMe)(CO)(NC_5H_5)I_3]$, 489–96
Zinc(II) complexes of dipropylenetriamine and *N*-(2-aminoethyl)propane-1,3-diamine: a carbon-13 nuclear magnetic resonance study, 1989–98
CARBONATE
Formation of carbonato and hydroxo complexes of vanadium(IV) on reaction of carbonylbis(η-pentamethylcyclopentadienyl)vanadium(II) with dinitrogen oxide, 2505–6
CARBON DIOXIDE
Insertion of carbon dioxide into a molybdenum–hydrogen bond. Photochemical formation of hydridoformato complex of molybdenum(II), 2241–2
CARBONITRILE
Reactions of $[Ru(\eta^5\text{-}C_5H_5)ClL_2]$ (L = PPh_3, $AsPh_3$, or $SbPh_3$; L_2 = $Ph_2PCH_2CH_2PPh_2$ or $Ph_2PCH_2PPh_2$) with 1,4-piperazinedicarbonitrile or 1-piperidinecarbonitrile in the presence of an anion (BF_4^-, PF_6^-, BPh_4^-, or ClO_4^-), 2897–902
CARBON MONOXIDE
Study of relative stabilities of the intermediates in catalytic carbon monoxide hydrogenation reactions: *ab initio* calculations on the model compounds $[Fe(CO)_2(PH_3)_2H_2]$, $[Fe(CO)_2(PH_3)_2(CHO)H]$, $[Fe(CO)_2(PH_3)_2(CH_2O)]$, and $[Fe(CO)(PH_3)_2(CHO)_2]$, 249–52
CARBONYL
A case of solid–state isomerism for a rhodium carbonyl cluster anion. Synthesis, characterization in solution and *X*-ray crystallographic structures of the salts $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot Me_2CO$ and $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot C_6H_5Me$, 163–72
Stepwise construction of $[Os_6(CO)_{18}(\mu_6\text{-}P)]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of $[Os_6(\mu\text{-}H)_2(CO)_{20}(MeCN)(\mu_3\text{-}PH)]$ and $[PPh_3Me][Os_6(CO)_{18}(\mu_6\text{-}P)]$, 173–82
Nickel–iridium carbonyl clusters. Synthesis and solid-state structure of the trianion $[Ir_3Ni_6(\mu\text{-}CO)_6(\mu_3\text{-}CO)_2(CO)_9]^{3-}$. The first example of a mixed iridium–nickel carbonyl cluster, 201–6
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 69. Reactions of $[MoW(\equiv CC_6H_4Me\text{-}4)(CO)_7(\eta\text{-}C_5H_5)]$ with but-2-ene; crystal structures of $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)\}(CO)_3(\eta\text{-}MeC_2Me)_2(\eta\text{-}C_5H_5)]$ and $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(=CH_2)C(H)MeC(O)\}(CO)_6(\eta\text{-}C_5H_5)]\cdot 0.5CH_2Cl_2$, 207–14
Electrochemical and spectroscopic studies on tetranuclear $[\{Re(\mu_3\text{-}X)(CO)_3\}_4]$ (X = Cl, Br, or I) and acetonitrile complexes derived therefrom, 245–8
An improved route to the synthesis of μ-(alkane- or arene-thiolato)(μ-ethenyl)di-iron complexes. Crystal structure of μ-phenylmethanethiolato-μ-(1,2-diphenylethenyl)-hexacarbonyldi-iron(*Fe–Fe*), 281–4
Reactivity of cationic molybdenum(II) complexes. Part 1. Hydride reduction of the 18 electron complexes $[Mo(CO)_3(\eta\text{-}C_5Me_5)L]^+$ [L = PPh_3 or $P(OMe)_3$] and isolation of the thermally stable formyl complex *cis*-$[Mo(CO)_2(\eta\text{-}C_5Me_5)\{P(OMe)_3\}(CHO)]$. Crystal structure of $[Mo(CO)_3(\eta\text{-}C_5Me_5)(PPh_3)]BF_4\cdot 0.5MeOH$, 329–34
Synthesis of Group 1B sandwich cluster compounds with $[Pt_3(\mu\text{-}CO)_3(PPh_3)_3]$ and the structural characterisation of $[M\{Pt_3(\mu\text{-}CO)_3(PPh_3)_3\}_2]PF_6$ (M = Au or Cu) by single-crystal *X*-ray techniques, 335–40
Complexes of 1,1,2-tris(diphenylphosphino)ethane with Group 6 metal carbonyls, 503–8
Synthesis, single-crystal *X*-ray structures, and fluxional behaviour of 1,2-$[Os_3(CO)_{10}(\mu\text{-}dppe)]$ and its protonated derivative 1,2-$[Os_3(\mu\text{-}H)(CO)_{10}(\mu\text{-}dppe)][PF_6]$ where dppe = $Ph_2PCH_2CH_2PPh_2$, 579–86
Reactivity of cationic molybdenum(II) complexes. Part 2. Electrochemical reduction of the eighteen-electron complexes $[Mo(CO)_3(\eta^5\text{-}C_5Me_5)L]^+$ [L = CO, *p*-MeC_6H_4NC, or $P(OMe)_3$]. Crystal structure of $[Mo_2(CO)_6(\eta^5\text{-}C_5Me_5)_2]$, 635–40
Stereochemical non-rigidity in rhodium–triruthenium clusters studied by nuclear magnetic resonance spectroscopy, 675–84
Preparation and reactions of $[Fe(Ph_2PCH_2PPh_2\text{-}P)(CO)(COMe)(\eta^5\text{-}C_5H_5)]$ and its derivatives, 725–8
Organo–platinum–iron complexes containing one bridging $Ph_2PCH_2PPh_2$ ligand. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CO)Pt(PPh_3)]$, $[(OC)_2Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)C_2H_2\}Pt(PPh_3)]$, and $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CMe{=}CH_2)\text{-}Pt(PPh_3)][BF_4]$, 741–50
The heteronuclear cluster chemistry of the Group 1B metals. Part 5. *X*-Ray crystal structure and dynamic behaviour of the heptanuclear mixed-metal cluster $[Au_3Ru_4(\mu\text{-}H)(CO)_{12}(\mu\text{-}Ph_2PCH_2PPh_2)(PPh_3)]$, 751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 6. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (M = Cu or Ag, n = 1—6). *X*-Ray crystal structures of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 2, 3, or 5), 757–68
An iron-57 and gold-197 Mössbauer spectroscopic investigation of the bonding in two gold–iron cluster compounds, 781–4
Production of binary oxides by photolysis of $M(CO)_6$ molecules (M = Cr, Mo, or W) isolated in O_2-doped argon matrices, 809–18
Hydrido-clusters derived by protonation, hydrogenation, or photolytic decarbonylation of the chelating diphosphine compounds 1,1-$[Os_3(CO)_{10}(diphosphine)]$ where diphosphine is $Ph_2PCH_2CH_2PPh_2$ or $Ph_2PCH_2CH_2CH_2PPh_2$, and crystal structure of $[OsH_2\{Ph_2P(CH_2)_3PC_6H_4\}(CO)_8]\cdot 0.5CH_2Cl_2$, 827–32
Synthesis, characterization, and electrochemistry of dicyclopentadienylsiloxane-bridged dicarbonyldi-iron, 833–8
Synthesis, reactivity, and spectroscopic studies of some tetranuclear osmium clusters. Structural characterization of $[Os_4H(CO)_{12}\{\mu_3\text{-}NC(O)Me\}\{M(PPh_3)_3\}]$ (M = Au or Cu) and $[N(PPh_3)_2][Os_4H_2(CO)_{12}I]$, 913–24
Chemistry of phosphido-bridged dimolybdenum complexes. Part 1. High-yield synthesis of $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}H)(\mu\text{-}PPh_2)(CO)_4]$ and its reactions with organophosphorus ligands: *X*-ray crystal structure of $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}H)(\mu\text{-}PPh_2)(CO)_3\{P(OMe)_3\}]$, 1083–8
Crystal and molecular structure of the anion $[Rh_7(CO)_{16}]^{3-}$ in its tetramethylammonium salt, 1103–6
Stepwise construction of $[Os_6(CO)_{18}(\mu_6\text{-}P)]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of $[Os_6(\mu\text{-}H)_2(CO)_{20}(MeCN)(\mu_3\text{-}PH)]$ and $[PPh_3Me][Os_6(CO)_{18}(\mu_6\text{-}P)]$ (**1988, 173**), 1107
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 70. Tetranuclear metal compounds with rhenium–molybdenum or –tungsten bonds. Crystal structures of $[Mo_2Re_2(\mu_3\text{-}CC_6H_4Me\text{-}4)_2(\mu\text{-}CO)_2(CO)_2(\eta\text{-}C_5H_5)_2]\cdot 1.5CH_2Cl_2$ and $[W_2Re_2(\mu\text{-}H)(\mu_3\text{-}\sigma{:}\sigma'{:}\eta^2\text{-}C{=}CH_2)(\mu_3\text{-}CMe)(\mu\text{-}CO)(CO)_8(\eta\text{-}C_5H_5)_2]$, 1121–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 71. Synthesis of tungsten–iridium complexes crystal structures of $[W_2Ir(\mu_3\text{-}RC_2R)Cl(CO)_4(\eta\text{-}C_5H_5)_2]\cdot CH_2Cl_2$ and $[W_2Ir(\mu\text{-}CR)(\mu_3\text{-}CR)Cl(CO)_4(\eta\text{-}C_5H_5)_2]$ (R = C_6H_4Me-4), 1131–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 72. Di- and tri-metal compounds prepared from the alkylidyne tungsten complexes $[W(\equiv CR)(CO)_3\{H_2B(pz)_2\}]$ [R = C_6H_4Me-4 or Me, $H_2B(pz)_2$ = dihydrobis(pyrazol-1-yl)borate], 1139–46
Organo–platinum–iron complexes derived from allenes. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)CH_2C(=CH_2)\}Pt(PPh_3)]$, $[(OC)_3Fe(\mu\text{-}dppm)\{\mu\text{-}C(=CH_2)CH_2\}Pt(PPh_3)]$, and $[(OC)_2Fe(\mu\text{-}dppm)\{\eta^4\text{-}(CH_2)(CMe_2)CPt\text{-}(PPh_3)\}]$, 1185–92
Synthesis and characterisation of the tetranuclear phosphinidene clusters $[Os_3MH_2(CO)_{12}(PR)]$ (M = Os, R = Ph or cyclo-C_6H_{11} (M = Ru, R = cyclo-C_6H_{11}) and the crystal and molecular structure of $[Os_4(\mu\text{-}H)_2(CO)_{12}(\mu_3\text{-}PC_6H_{11})]$, 1199–204
Preparation, *X*-ray structural analysis, and method of interconversion of two isomeric forms of $[Os_6(CO)_{16}\{P(OMe)_3\}_2]$, 1205–12
Mixed-metal carbido carbonyl clusters. Part 3. Synthesis and

CARBONYL (contd)
structural characterization of $[Rh_6C(CO)_{15}\{Ag(NCMe)\}_2]$·0.5MeOH, $[Rh_6C(CO)_{15}\{M(PPh_3)\}_2]$ (M = Cu, Ag, or Au), and of the anion $[Rh_6C(CO)_{15}\{Au(PPh_3)\}]^-$ as its PPh_4^+ salt, 1237–48
Reorientation of the alkyne moiety in the heterometallic cluster $[FeCo_2(CO)_9(EtC_2Et)]$, induced by phosphine, phosphite, or isonitrile substitution for CO. Crystal structure of $[FeCo_2(CO)_8(PPh_3)(EtC_2Et)]$, 1249–58
X-Ray crystal structures of two isomers of the hydrido–carbonyl anion $[Re_7(\mu\text{-}H)C(CO)_{21}]^{2-}$. The problematic existence of triply bridging hydrides in clusters containing interstitial main-group elements, 1281–8
Tri-, tetra-, penta-, and hexa-nuclear phenylphosphinidene-capped products from the reaction of dodecacarbonyltri-ruthenium with phenylphosphine: crystal structures of $[Ru_4(\mu_4\text{-}PPh)_2(\mu\text{-}CO)(CO)_{10}]$, $[Ru_5(\mu_4\text{-}PPh)\{\mu\text{-}PPh(OPr^n)\}(\mu\text{-}H)(CO)_{13}]$, $[Ru_6(\mu_4\text{-}PPh)_2(\mu_3\text{-}PPh)_2(CO)_{12}]$, and $[Ru_6(\mu_4\text{-}PPh)_3(\mu_3\text{-}PPh)_2(CO)_{12}]$, 1315–30
Ligand substitution of $[M(SnPh_3)(MeCN)_2(CO)_2(NO)]$ (M = Cr or W) and crystal structure of $[Cr(SnPh_3)(MeCN)\{P(OMe)_3\}(CO)_2(NO)]$, 1397–400
Reaction of $[FeCo(CO)_7(\mu\text{-}CH{=}CRH)]$ (R = H or Ph) with dimethylphenylphosphine. Synthesis and structure of $[FeCo(CO)_4(\mu\text{-}CO)(PMe_2Ph)_2(\mu\text{-}CH{=}CH_2)]$, an electronically unbalanced iron–cobalt complex, 1417–20
Facile carbon–carbon bond formation on a triosmium cluster: crystal structures of $[Os_3(CO)_8\{C(Me)C(Me)C(O)C(Me)C(Me)C(Ph)C(Ph)\}]$ and $[Os_3(CO)_8\{P(OMe)_3\}\{C(Me)C(Me)C(O)C(Me)C(Me)\}]$, 1421–4
The reactions of $[Ru_3(CO)_{12}]$ with nitrogen-containing heterocycles. Crystal structures of $[Ru_3(\mu\text{-}H)(\mu_3\text{-}ppy)(CO)_9]$ and $[Ru_3(\mu\text{-}napy)(\mu\text{-}CO)_3(CO)_7]$, 1437–44
Stereochemical rigidity of the square-pyramidal $W(CO)_5$ moiety during 1,2- and 1,3-metallotropic shifts in sulphur ligand complexes, 1489–92
The photochemistry of cyclopentadienyl platinum carbonyl dimers: characterization of $[Pt_2(\mu\text{-}CO)(\eta^5\text{-}C_5R_5)_2]$ (R = H or Me) using matrix isolation and fast time-resolved infrared spectroscopy, 1501–8
Hydride fluxionality in high-nuclearity osmium carbonyl clusters, 1517–22
The oxidative isomerisation of *cis,cis*-dicarbonylmanganese(I) derivatives; isolation of the resulting *trans*-dicarbonylmanganese(II) complexes and the *X*-ray structure of *cis,cis*-$[MnBr(CO)_2\{P(OPh)_3\}(Ph_2PCH_2PPh_2)]$, 1623–30
A theoretical analysis of high-nuclearity metal carbonyl clusters, 1657–64
Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of $[(\eta^5\text{-}C_5H_5)(OC)_2Mo\{\mu\text{-}Ag(PPh_3)\}(\mu\text{-}PPh_2)Mn(CO)_4]$ and $[(\eta\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}I)(\mu\text{-}PPh_2)Mn(CO)_4]$, 1683–8
The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)\{\mu\text{-}Ph_2E(CH_2)_nE'Ph_2\}(CO)_{12}]$ (n = 1 or 2, E = E′ = As or E = As, E′ = P; n = 2, E = E′ = P). *X*-Ray crystal structure of $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)(\mu\text{-}Ph_2AsCH_2PPh_2)(CO)_{12}]$, 1795–802
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$, 1867–78
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 74. Salts of the anions $[W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]^-$ (R = C_6H_4Me-2 or $C_6H_3Me_2$-2,6) as reagents for the synthesis of compounds with heteronuclear metal–metal bonds: crystal structure of $[NEt_4][FeW(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta^5\text{-}C_2B_9H_9Me_2)]$, 1879–90
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 75. Reactions of octacarbonyldicobalt with the salts $[X][W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$ (X = NEt_4 or PPh_4; R = Me, Ph, C_6H_4Me-2, or C_6H_4Me-4); crystal structure of $[PPh_4][Co_2W(\mu_3\text{-}CPh)(CO)_8(\eta^5\text{-}C_2B_9H_9Me_2)]$·$0.5CH_2Cl_2$, 1891–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4), 1899–906
Kinetics of nucleophilic attack on co-ordinated organic moieties. Part 25. A nucleophilic order for attack upon the $[Fe(CO)_3(1\text{–}5\text{-}\eta\text{-}C_7H_9)]^+$ cation, 2009–14
Preparation and characterisation of mixed bismuth and ruthenium clusters; *X*-ray crystal structures of $[Ru_3(\mu\text{-}H)_3(CO)_9(\mu_3\text{-}Bi)]$, $[Ru_3(CO)_9(\mu_3\text{-}Bi)_2]$, and $[Ru_4(CO)_{12}(\mu_4\text{-}Bi)_2]$, 2091–8
Derivatives of $[Rh_6(CO)_{13}C]^{2-}$: solution structure of $[Rh_6H(CO)_{13}C]^-$ from nuclear magnetic resonance measurements and the *X*-ray crystal structure of $[Rh_6(CO)_{11}C(\mu\text{-}Ph_2PCH_2CH_2PPh_2)]^{2-}$, 2103–8
Synthesis and reactivity of mononuclear molybdenum phosphido complexes, $[Mo(CO)_2\{P(Cl)R\}(\eta\text{-}C_5H_5)]$[R = $CH(SiMe_3)_2$ or $NCMe_2CH_2CH_2CMe_2$]. *X*-Ray crystal structures of $[Mo(CO)_2\{P(X)(NCMe_2CH_2CH_2CH_2CMe_2)\}(\eta\text{-}C_5H_5)]$ (X = Cl or NMe_2) and $[Mo_2(CO)_4\{\mu\text{-}P_2[CH(SiMe_3)_2]_2\}(\eta\text{-}C_5H_5)_2]$, 2127–34
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. ^{109}Ag-$\{^1H\}$ INEPT nuclear magnetic resonance studies on $[Ag_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 1, 2, or 4) and *X*-ray crystal structure of $[Ag_2Ru_4(\mu_3\text{-}H)_2(\mu\text{-}Ph_2PCH_2PPh_2)(CO)_{12}]$, 2177–86
Ring expansion in dimetallacycle chemistry: preparation of a dimetallacyclopentanol from a dimetallacyclobutane, 2235–8
Formation of molecular chromium(IV) oxide (CrO_2) by photolysis of $Cr(CO)_6$ in O_2-doped argon matrices, 2255–60
Synthesis and oxidation reactions of mono- and di-nuclear rhodium carbonyl complexes of (*o*-diphenylphosphino-phenyl)amine, H_2L; *X*-ray structure analysis of a rhodium(II) amido-bridged dimer, $[\{Rh(\mu\text{-}HL)(CO)Cl\}_2]$·EtOH, 2287–92
Synthesis and chemical characterization of the hexanuclear anions $[Ir_6(CO)_{14}X]^-$ (X = Cl, Br, I, or SCN). Crystal and molecular structures of $[PPh_4][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}Br)]$ and $[N(PPh_3)_2][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}X)]$ (X = I or SCN), 2307–14
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron– molybdenum compounds with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2C(Me)C(Me)\}(CO)_4(\eta\text{-}C_5H_5)]$, $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2\}(CO)_5(\eta\text{-}C_5H_5)]$, and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CH_2PMe_3)CHMe\}(CO)_5(\eta\text{-}C_5H_5)]$, 2431–42
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 78. Reactions of $[MoFe(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_6(\eta\text{-}C_5H_5)]$ with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(O)C(Et)C(Et)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$ and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C[C(O)Me]\}(CO)_5(\eta\text{-}C_5H_5)]$, 2443–52
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 79. Synthesis and reactions of the alkylidynemetal complexes $[M(\equiv CR)(CO)_2(\eta\text{-}C_5H_5)]$ (R = $C_6H_3Me_2$-2,6, M = Cr, Mo, or W; R = C_6H_4Me-2, C_6H_4OMe-2, or $C_6H_4NMe_2$-4, M = Mo); crystal structure of the compound $[MoFe(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta\text{-}C_5H_5)]$, 2453–66
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 80. Mixed-metal tungsten and ruthenium compounds, 2467–74
Formation of carbonato and hydroxo complexes of vanadium(IV) on reaction of carbonylbis(η-pentamethylcyclopentadienyl)vanadium(II) with dinitrogen oxide, 2505–6
The oxidation of alkyne-bridged dimolybdenum complexes, 2509–11
Photochemical and photocatalytic behaviour of 'flyover-bridge' complexes, 2519–24
Transition-metal carbonyl derivatives of the germanes. Part 17. Tetracarbonylgermyl(trimethylgermyl)iron, $[Fe(CO)_4(GeH_3)(GeMe_3)]$, its conversion into $[\{Fe(CO)_4(GeH_2)\}_2]$, and hence to $[Co_4Fe_2Ge_2(CO)_{21}]$ (characterised by *X*-ray crystallography) *via* $[Co_4Fe_2Ge_2(CO)_{22}]$, 2629–34
Transition-metal carbonyl derivatives of the germanes. Part 18. Tetracarbonylbis(permethylgermyl)iron compounds $[Fe(CO)_4(GeMe_{3-x}H_x)(GeMe_{3-y}H_y)]$ for x,y = 0—3, 2635–44
Synthesis, characterisation, and catalytic activity of a phosphinidene stabilised tethered triruthenium cluster, 2649–54

CARBONYL (contd)
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$ **(1988, 1867)**, 2683
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4) **(1988, 1899)**, 2683
Preparation of carbonyl, halogeno, and alkyl niobocene complexes and their reactions with oxygen. Crystal structures of $[Nb(\eta\text{-}C_5H_4SiMe_3)_2Cl_2]$, $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(O)Me]$ and $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(C_6F_5)(CO)]$, 2685–94
Electron spin resonance studies of organometallic manganese(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 2695–700
Synthesis and structures of phosphinidene and phosphido complexes of iron and cobalt, 2713–22
Synthesis and spectroscopic properties of the 'mixed' seven-co-ordinate complexes $[MI_2(CO)_3L(L')]$ [M = Mo or W; L,L' = PPh_3, $PPh_2(C_6H_{11})$, $PPh(C_6H_{11})_2$, $AsPh_3$, or $SbPh_3$] and rearrangement of selected $[MI_2(CO)_3L(L')]$ to $[HL][MI_3(CO)_3L']$. *X*-Ray crystal structure of $[PPh_2(C_6H_{11})H][WI_3(CO)_3(SbPh_3)]\cdot Et_2O$, 2729–34
Protonation *versus* oxidation in the reactions of trifluoroacetic acid with dinuclear osmium(I) complexes: molecular structure of $[Os_2(MeCO_2)_2(\mu\text{-}H)(CO)_4(PMe_2Ph)_2][PF_6]$, 2753–8
The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_nEPh_2\}(CO)_{12}]$ (M = Cu or Ag; E = As or P; *n* = 1 or 2). *X*-Ray crystal structure of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_2PPh_2\}(CO)_{12}]$, 2787–96
Studies on olefin-co-ordinating transition metal carbene complexes. Part 12. Novel synthesis and structural characterization of (η^6-arene)dicarbonyliron complexes, and their oxidation products, 2803–8
Structural comparison of cluster compounds containing an edge-bridging $M(PPh_3)$ (M = Cu, Ag, or Au) fragment. *X*-Ray crystal structure of $[AgRu_3(CO)_9(C_2Bu^t)(PPh_3)]$, 2889–92
Synthetic and structural studies on organomolybdenum and organotungsten complexes containing bismuth. *X*-Ray crystal structures of $[BiCl\{Mo(CO)_3(\eta\text{-}C_5H_5)\}_2]$ and $[BiCl\{Mo(CO)_2(CNBu^t)(\eta\text{-}C_5H_5)\}_2]$, 2941–52
Dinuclear allyl and μ-vinyl complexes from the reactions of a μ-hydrido dimanganese and a μ-hydrido manganese–molybdenum complex with alkynes containing α-methyl or α-methylene substituents, 2953–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 81. Reactions of the compound $[Fe_2(\mu\text{-}CH_2)(CO)_8]$ with alkylidyne–molybdenum and –tungsten complexes. Reactivity of the product $[WFe\{\mu\text{-}\sigma\text{:}\eta\text{-}CH{=}CH(C_6H_4Me\text{-}4)\}(CO)_6(\eta\text{-}C_5H_5)]$, and crystal structures of the species $[W_2Fe(\mu_3\text{-}CC_6H_4Me\text{-}4)\{\mu\text{-}\sigma\text{:}\eta\text{-}C(C_6H_4Me\text{-}4){=}CH_2\}(CO)_6(\eta\text{-}C_5H_5)_2]$ and $[WFe\{\mu\text{-}C(Et)C(Et)C(H)CH(C_6H_4Me\text{-}4)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$, 3017–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 82. Dimetallic compounds prepared from the complexes $[MR_2(\eta\text{-}C_5H_5)_2]$ (R = Cl or Bu^n, M = Ti or Zr), 3031–4
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 83. Molybdenum and tungsten complexes containing the alkylidyne group $C\{\eta^6\text{-}C_6H_4(OMe\text{-}2)Cr(CO)_3\}$, 3035–40
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron– molybdenum compounds with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2C(Me)C(Me)\}(CO)_4(\eta\text{-}C_5H_5)]$, $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2\}(CO)_5(\eta\text{-}C_5H_5)]$, and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CH_2PMe_3)CHMe\}(CO)_5(\eta\text{-}C_5H_5)]$ **(1988, 2431)**, 3063

CARBOXIMIDATE
Crystal structures and magnetic properties of the ...ono-μ-halogeno-bridged copper(II) chains Cu(pcpci)X [pcpci = *N*-(2'-pyridylcarbonyl)pyridine-2-carboximidate, X = Cl or Br], 3041–6

CARBOXYLATE
Synthesis, structure, and spectroscopic and magnetic properties of *catena*-μ-aqua-diaquabis(2,6-dimethoxybenzoato)metal(II) monohydrate complexes of manganese, cobalt, nickel, and zinc. *X*-Ray crystal structure of $[Co(dmba)_2(H_2O)_3]\cdot H_2O$, 363–8
The synthesis of di- and tetra-nuclear *p*-cymene–osmium hydride complexes; characterisation by $^1H(^{187}Os)$ reverse INEPT two-dimensional nuclear magnetic resonance spectroscopy, 629–34
Synthesis, spectroscopic, magnetic and electrochemical properties of diruthenium-(II,II) and -(II,III) complexes containing the mixed-carboxylato ligand systems $CH_3CO_2^-$–$CF_3CO_2^-$ and $C_6H_5CO_2^-$–$CF_3CO_2^-$, 661–8
Acid- and base-catalysed displacement of the carboxylate ligand from $[Pt(dien)(RCO_2)]^+$ (dien = 1,5-diamino-3-azapentane; R = CH_2Cl, $CHCl_2$, or CCl_3) in aqueous solution, 1049–52
Kinetics of the displacement of cyclobutane-1,1-dicarboxylate from diammine(cyclobutane-1,1-dicarboxylato)-platinum(II) in aqueous solution, 2135–40
Infrared, resonance-Raman, and excitation profile studies of $[Os_2(O_2CCH_3Cl)_4Cl_2]$, $[Os_2(O_2CC_2H_5)_4Cl_2]$, and $[Os_2(O_2CC_3H_7)_4Cl_2]$: assignment of osmium–osmium, osmium–oxygen, and osmium–chlorine stretching vibrations, 2601–6
Protonation *versus* oxidation in the reactions of trifluoroacetic acid with dinuclear osmium(I) complexes: molecular structure of $[Os_2(MeCO_2)_2(\mu\text{-}H)(CO)_4(PMe_2Ph)_2][PF_6]$, 2753–8

CATALYSIS
Photocatalytic dimerization of olefins by decatungstate(VI), $[W_{10}O_{32}]^{4-}$, in acetonitrile and magnetic resonance studies of photoreduced species, 183–90
Study of relative stabilities of the intermediates in catalytic carbon monoxide hydrogenation reactions: *ab initio* calculations on the model compounds $[Fe(CO)_2(PH_3)_2H_2]$, $[Fe(CO)_2(PH_3)_2(CHO)H]$, $[Fe(CO)_2(PH_3)_2(CH_2O)]$, and $[Fe(CO)(PH_3)_2(CHO)_2]$, 249–52
Surface acidity of the layered pyrophosphates of quadrivalent Ti, Zr, Ge, and Sn and their activity in some acid-catalysed reactions, 881–6
Selective hydrogenation of PhCH=CHCOMe to the unsaturated alcohol catalysed by $[IrH_3(PR_3)_3]$ (R = alkyl or aryl), 947–52
Acid- and base-catalysed displacement of the carboxylate ligand from $[Pt(dien)(RCO_2)]^+$ (dien = 1,5-diamino-3-azapentane; R = CH_2Cl, $CHCl_2$, or CCl_3) in aqueous solution, 1049–52
Role of the nature of the metal centre in the catalysed addition of β-dicarbonyls to electrophilically activated nitriles, 1213–6
Homogeneous deuteriation of alkenes using $[RhX(PR_3)_3]$ (X = halide, R = aryl) catalysts, 1653–6
Photochemical and photocatalytic behaviour of 'flyover-bridge' complexes, 2519–24
Synthesis, characterisation, and catalytic activity of a phosphinidene stabilised tethered triruthenium cluster, 2649–54
Lanthanide(III)-catalysed addition of glycolate to maleate. Investigation of intermediates using multinuclear magnetic resonance spectroscopy, 2723–8

CERIUM
Cerium(IV)-induced decarboxylation of penta-ammine oxaloacetatocobalt(III) perchlorate, 1413–6
Mechanism of reactions of some N^1-substituted biguanides with chromium(VI) in aqueous sulphuric acid media, 1557–60

CHIRALITY
Synthesis of the arene complex $[\{RuCl_2(\eta^6\text{-}o\text{-}MeC_6H_4CO_2Me)\}_2]$ and separation of its diastereomeric (−)(*S*)-1-phenylethylamine adducts, 315–20
Crystal structure and spectroscopic properties of mercury(II) halide complexes. Part 4. Crystal and molecular structure and circular dichroism spectra of the chiral 1:1 adduct $(S)_s(S)_c(-)_{589}$-methyl 2-phenylbutyl thioether-mercury(II) chloride, 2915–20

CHLORIDE
X-Ray crystal structure identification of the ternary complex $MgCl_2\cdot 2SbCl_3\cdot 6MeCN$, 215–8
The crystal structures, magnetic and electrical properties of two polymeric chlorocuprate(II) compounds, 265–72
The crystal structure of nonachlorodimolybdenum(V) heptachlorodioxodimolybdate(V), 485–8
Formation and reaction of trichloro complexes of bivalent transition metals in 1,2-dichloroethane, 591–4
Nucleophilic discrimination and the *trans* effect. The kinetics of displacement of X from *trans*-$[Pt(L)(X)Cl_2]^{n-}$ (L = Me_2SO,

CHLORIDE (contd)
Et_2S, PMe_3, PEt_3, PPh_3, or $AsEt_3$; X = Cl, *n* = 1; X = MeOH, *n* = 0) by neutral and anionic nucleophiles, 2347–52
Synthesis and properties of pentachloro(ligand)iridate(IV) anions $[IrLCl_5]^-$ (L = pyridine, PPh_3, $AsPh_3$, $SbPh_3$, SMe_2, SPh_2, or $SeMe_2$), 2677–80
The infrared spectra of matrix isolated thorium and uranium tetrachlorides. Change of shape with matrix gas, 2759–62
CHROMIUM
Synthesis and reactions of d^0 imido aryl derivatives of chromium, molybdenum, and tungsten. Crystal structures of $Cr(NBu^t)_2(C_6H_2Me_3\text{-}2,4,6)_2$, $Mo(NBu^t)_2(C_6H_3Me_2\text{-}2,6)_2$, and $Cr(NBu^t)_2[C(C_6H_3Me_3\text{-}2,4,6)\text{=}NBu^t](C_6H_2Me_3\text{-}2,4,6)$, 53–60
Conjugate addition of acetylides to complexes of type $[M(CO)_4\{(Ph_2P)_2C\text{=}CH_2\}]$ (M = Cr, Mo, or W): crystal structure of $[M(CO)_4\{(Ph_2P)_2C\text{=}CHCH\text{=}CHPh\}]$ formed by the base-catalysed isomerization of $[M(CO)_4\{(Ph_2P)_2\text{-}CHCH_2C\equiv CPh\}]$, 89–92
Complexes of 1,1,2-tris(diphenylphosphino)ethane with Group 6 metal carbonyls, 503–8
Production of binary oxides by photolysis of $M(CO)_6$ molecules (M = Cr, Mo, or W) isolated in O_2-doped argon matrices, 809–18
Ligand substitution of $[M(SnPh_3)(MeCN)_2(CO)_2(NO)]$ (M = Cr or W) and crystal structure of $[Cr(SnPh_3)(MeCN)\{P(OMe)_3\}(CO)_2(NO)]$, 1397–400
Mechanism of reactions of some N^1-substituted biguanides with chromium(VI) in aqueous sulphuric acid media, 1557–60
Crystal growth, structure, and properties of $KLa(CrO_4)_2$, 1911–4
Formation of molecular chromium(IV) oxide (CrO_2) by photolysis of $Cr(CO)_6$ in O_2-doped argon matrices, 2255–60
Template reactions of 1,4-bis(α-carboxybenzylidenehydrazino)phthalazine with cobalt(II), nickel(II), and chromium(III), 2293–6
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 79. Synthesis and reactions of the alkylidynemetal complexes $[M(\equiv CR)(CO)_2(\eta\text{-}C_5H_5)]$ (R = $C_6H_3Me_2$-2,6, M = Cr, Mo, or W; R = C_6H_4Me-2, C_6H_4OMe-2, or $C_6H_4NMe_2$-4, M = Mo); crystal structure of the compound $[MoFe(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta\text{-}C_5H_5)]$, 2453–66
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 83. Molybdenum and tungsten complexes containing the alkylidyne group $C\{\eta^6\text{-}C_6H_4(OMe\text{-}2)Cr(CO)_3\}$, 3035–40
CIRCULAR DICHROISM
A model for the interpretation of the absorption and circular dichroism spectra of tris(di-imine) complexes of iron(II) and ruthenium(II), 393–400
Crystal structure and spectroscopic properties of mercury(II) halide complexes. Part 4. Crystal and molecular structure and circular dichroism spectra of the chiral 1:1 adduct $(S)_4(S)_4(-)_{589}$-methyl 2-phenylbutyl thioether-mercury(II) chloride, 2915–20
CLUSTER
Synthesis and characterization of Ti_5Te_4-type molybdenum cluster compounds, $A_xMo_5As_4$ (A = Cu, Al, or Ga), 1–6
Polarised neutron diffraction study of spin localisation in Nb_6I_{11}, 111–6
A case of solid–state isomerism for a rhodium carbonyl cluster anion. Synthesis, characterization in solution and *X*-ray crystallographic structures of the salts $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot Me_2CO$ and $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot C_6H_5Me$, 163–72
Stepwise construction of $[Os_6(CO)_{18}(\mu_6\text{-}P)]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of $[Os_6(\mu\text{-}H)_2(CO)_{20}(MeCN)(\mu_3\text{-}PH)]$ and $[PPh_3Me][Os_6(CO)_{18}(\mu_6\text{-}P)]$, 173–82
Nickel–iridium carbonyl clusters. Synthesis and solid-state structure of the trianion $[Ir_3Ni_6(\mu\text{-}CO)_6(\mu_3\text{-}CO)_2(CO)_9]^{3-}$. The first example of a mixed iridium–nickel carbonyl cluster, 201–6
triangulo-Trirhenium(III) alkyl compounds. The *X*-ray crystal structures of $Re_3(\mu\text{-}Cl)_{1.5}(\mu\text{-}Me)_{1.5}(CH_2Ph)_6$ and $Re_3(\mu\text{-}Me)_3(CH_2Ph)_6$, 219–26
Synthesis of Group 1B sandwich cluster compounds with $[Pt_3(\mu\text{-}CO)_3(PPh_3)_3]$ and the structural characterisation of $[M\{Pt_3(\mu\text{-}CO)_3(PPh_3)_3\}_2]PF_6$ (M = Au or Cu) by single-crystal *X*-ray techniques, 335–40
Synthesis, single-crystal *X*-ray structures, and fluxional behaviour of 1,2-$[Os_3(CO)_{10}(\mu\text{-}dppe)]$ and its protonated derivative 1,2-$[Os_3(\mu\text{-}H)(CO)_{10}(\mu\text{-}dppe)][PF_6]$ where dppe = $Ph_2PCH_2CH_2PPh_2$, 579–86
Formation and structure of $[Ni_3(\mu_3\text{-}S)(\mu\text{-}SMe)_3(SMe)_3]^{2-}$, a cyclic trinuclear metal–sulphide–thiolate cluster with simple monofunctional thiolate ligands, 657–60
Stereochemical non-rigidity in rhodium–triruthenium clusters studied by nuclear magnetic resonance spectroscopy, 675–84
The heteronuclear cluster chemistry of the Group 1B metals. Part 5. *X*-Ray crystal structure and dynamic behaviour of the heptanuclear mixed-metal cluster $[Au_3Ru_4(\mu\text{-}H)(CO)_{12}(\mu\text{-}Ph_2PCH_2PPh_2)(PPh_3)]$, 751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 6. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (M = Cu or Ag, *n* = 1—6). *X*-Ray crystal structures of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (*n* = 2, 3, or 5), 757–68
An iron-57 and gold-197 Mössbauer spectroscopic investigation of the bonding in two gold–iron cluster compounds, 781–4
Carbon-13 and oxygen-17 nuclear magnetic resonance relaxation studies of $[M_3(CO)_{12}]$ derivatives (M = Fe, Ru, or Os), 791–2
Hydrido-clusters derived by protonation, hydrogenation, or photolytic decarbonylation of the chelating diphosphine compounds 1,1-$[Os_3(CO)_{10}(diphosphine)]$ where diphosphine is $Ph_2PCH_2CH_2PPh_2$ or $Ph_2PCH_2CH_2CH_2PPh_2$, and crystal structure of $[OsH_2\{Ph_2P(CH_2)_3PC_6H_4\}(CO)_8]\cdot 0.5CH_2Cl_2$, 827–32
Synthesis, reactivity, and spectroscopic studies of some tetranuclear osmium clusters. Structural characterization of $[Os_4H(CO)_{12}\{\mu_3\text{-}NC(O)Me\}\{M(PPh_3)\}]$ (M = Au or Cu) and $[N(PPh_3)_2][Os_4H_2(CO)_{12}I]$, 913–24
Crystal and molecular structure of the anion $[Rh_7(CO)_{16}]^{3-}$ in its tetramethylammonium salt, 1103–6
Stepwise construction of $[Os_6(CO)_{18}(\mu_6\text{-}P)]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of $[Os_6(\mu\text{-}H)_2(CO)_{20}(MeCN)(\mu_3\text{-}PH)]$ and $[PPh_3Me][Os_6(CO)_{18}(\mu_6\text{-}P)]$ (**1988, 173**), 1107
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 70. Tetranuclear metal compounds with rhenium–molybdenum or –tungsten bonds. Crystal structures of $[Mo_2Re_2(\mu_3\text{-}CC_6H_4Me\text{-}4)_2(\mu\text{-}CO)_2(CO)_7(\eta\text{-}C_5H_5)_2]\cdot 1.5CH_2Cl_2$ and $[W_2Re_2(\mu\text{-}H)(\mu_3\text{-}\sigma\text{:}\sigma'\text{:}\eta^2\text{-}C\text{=}CH_2)(\mu_3\text{-}CMe)(\mu\text{-}CO)(CO)_8(\eta\text{-}C_5H_5)_2]$, 1121–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 71. Synthesis of tungsten–iridium complexes crystal structures of $[W_2Ir(\mu_3\text{-}RC_2R)Cl(CO)_4(\eta\text{-}C_5H_5)_2]\cdot CH_2Cl_2$ and $[W_2Ir(\mu\text{-}CR)(\mu_3\text{-}CR)Cl(CO)_4(\eta\text{-}C_5H_5)_2]$ (R = C_6H_4Me-4), 1131–8
Synthesis and characterisation of the tetranuclear phosphinidene clusters $[Os_3MH_2(CO)_{12}(PR)]$ (M = Os, R = Ph or cyclo-C_6H_{11} (M = Ru, R = cyclo-C_6H_{11}) and the crystal and molecular structure of $[Os_4(\mu\text{-}H)_2(CO)_{12}(\mu_3\text{-}PC_6H_{11})]$, 1199–204
Preparation, *X*-ray structural analysis, and method of interconversion of two isomeric forms of $[Os_6(CO)_{16}\{P(OMe)_3\}_2]$, 1205–12
Mixed-metal carbido carbonyl clusters. Part 3. Synthesis and structural characterization of $[Rh_6C(CO)_{15}\{Ag(NCMe)\}_2]\cdot 0.5MeOH$, $[Rh_6C(CO)_{15}\{M(PPh_3)\}_2]$ (M = Cu, Ag, or Au), and of the anion $[Rh_6C(CO)_{15}\{Au(PPh_3)\}]^-$ as its PPh_4^+ salt, 1237–48
Reorientation of the alkyne moiety in the heterometallic cluster $[FeCo_2(CO)_9(EtC_2Et)]$, induced by phosphine, phosphite, or isonitrile substitution for CO. Crystal structure of $[FeCo_2(CO)_8(PPh_3)(EtC_2Et)]$, 1249–58
X-Ray crystal structures of two isomers of the hydrido–carbonyl anion $[Re_7(\mu\text{-}H)C(CO)_{21}]^{2-}$. The problematic existence of triply bridging hydrides in clusters containing interstitial main-group elements, 1281–8
Tri-, tetra-, penta-, and hexa-nuclear phenylphosphinidene-capped products from the reaction of dodecacarbonyltri-ruthenium with phenylphosphine: crystal structures of $[Ru_4(\mu_4\text{-}PPh)_2(\mu\text{-}CO)(CO)_{10}]$, $[Ru_5(\mu_4\text{-}PPh)\{\mu\text{-}PPh(OPr^n)\}(\mu\text{-}H)(CO)_{13}]$, $[Ru_6(\mu_4\text{-}PPh)_2(\mu_3\text{-}PPh)_2(CO)_{12}]$, and $[Ru_6(\mu_4\text{-}PPh)_3(\mu_3\text{-}PPh)_2(CO)_{12}]$, 1315–30
Facile carbon–carbon bond formation on a triosmium cluster:

CLUSTER (contd)
crystal structures of $[Os_3(CO)_8\{C(Me)C(Me)C(O)C(Me)C(Me)C(Ph)C(Ph)\}]$ and $[Os_3(CO)_8\{P(OMe)_3\}\{C(Me)C(Me)C(O)C(Me)C(Me)\}]$, 1421–4
The reactions of $[Ru_3(CO)_{12}]$ with nitrogen-containing heterocycles. Crystal structures of $[Ru_3(\mu\text{-}H)(\mu_3\text{-}ppy)(CO)_9]$ and $[Ru_3(\mu\text{-}napy)(\mu\text{-}CO)_3(CO)_7]$, 1437–44
Facilitation of the substitution reactions of triangular platinum cluster compounds and the structural characterisations of $[Pt_3(\mu\text{-}SO_2)_3\{P(C_6H_{11})_3\}_3]$ and $[NEt_4][Pt_3(\mu\text{-}Br)(\mu\text{-}SO_2)_2\{P(C_6H_{11})_3\}_3]$ by single-crystal *X*-ray techniques, 1461–6
Synthesis and structural characterisation of some *triangulo*- and binuclear clusters of platinum from the reaction of $[Pt_3(\mu\text{-}SO_2)_3\{P(C_6H_{11})_3\}_3]$ with 2,6-xylyl isocyanide, 1509–16
Hydride fluxionality in high-nuclearity osmium carbonyl clusters, 1517–22
A theoretical analysis of high-nuclearity metal carbonyl clusters, 1657–64
Mixed rhenium–gold polyhydrides that contain ReAu and $ReAu_2$ cores, 1701–4
Synthesis and structural characterisation of a novel high-nuclearity gold–tin cluster compound, $[Au_8(PPh_3)_7(SnCl_3)]_2[SnCl_6]$, 1751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)\{\mu\text{-}Ph_2E(CH_2)_nE'Ph_2\}(CO)_{12}]$ (n = 1 or 2, E = E′ = As or E = As, E′ = P; n = 2, E = E′ = P). *X*-Ray crystal structure of $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)(\mu\text{-}Ph_2AsCH_2PPh_2)(CO)_{12}]$, 1795–802
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 75. Reactions of octacarbonyldicobalt with the salts $[X][W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$ (X = NEt_4 or PPh_4; R = Me, Ph, C_6H_4Me-2, or C_6H_4Me-4); crystal structure of $[PPh_4][Co_2W(\mu_3\text{-}CPh)(CO)_8(\eta^5\text{-}C_2B_9H_9Me_2)]\cdot 0.5CH_2Cl_2$, 1891–8
Preparation and characterisation of mixed bismuth and ruthenium clusters; *X*-ray crystal structures of $[Ru_3(\mu\text{-}H)_3(CO)_9(\mu_3\text{-}Bi)]$, $[Ru_3(CO)_9(\mu_3\text{-}Bi)_2]$, and $[Ru_4(CO)_{12}(\mu_4\text{-}Bi)_2]$, 2091–8
Derivatives of $[Rh_6(CO)_{13}C]^{2-}$: solution structure of $[Rh_6H(CO)_{13}C]^-$ from nuclear magnetic resonance measurements and the *X*-ray crystal structure of $[Rh_6(CO)_{11}C(\mu\text{-}Ph_2PCH_2CH_2PPh_2)]^{2-}$, 2103–8
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. $^{109}Ag\text{-}\{^1H\}$ INEPT nuclear magnetic resonance studies on $[Ag_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 1, 2, or 4) and *X*-ray crystal structure of $[Ag_2Ru_4(\mu_3\text{-}H)_2(\mu\text{-}Ph_2PCH_2PPh_2)(CO)_{12}]$, 2177–86
Syntheses and reactivity of acetylide-containing clusters of Group 1B metals. Stepwise syntheses of trinuclear $[Au_2Cu(C_2Ph)_4]^-$ and pentanuclear $[Au_3Cu_2(C_2Ph)_6]^-$ and $[Au_3Ag_2(C_2Ph)_6]^-$ clusters, 2297–300
Synthesis and chemical characterization of the hexanuclear anions $[Ir_6(CO)_{14}X]^-$ (X = Cl, Br, I, or SCN). Crystal and molecular structures of $[PPh_4][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}Br)]$ and $[N(PPh_3)_2][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}X)]$ (X = I or SCN), 2307–14
On the reduction of iron–sulphur clusters under carbon monoxide, 2329–34
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 80. Mixed-metal tungsten and ruthenium compounds, 2467–74
Synthesis, characterisation, and catalytic activity of a phosphinidene stabilised tethered triruthenium cluster, 2649–54
The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_nEPh_2\}(CO)_{12}]$ (M = Cu or Ag; E = As or P; n = 1 or 2). *X*-Ray crystal structure of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_2PPh_2\}(CO)_{12}]$, 2787–96
Structural comparison of cluster compounds containing an edge-bridging $M(PPh_3)$ (M = Cu, Ag, or Au) fragment. *X*-Ray crystal structure of $[AgRu_3(CO)_9(C_2Bu^t)(PPh_3)]$, 2889–92
Heterobimetallic clusters derived from $[MS_4]^{2-}$ (M = Mo or W): synthesis and structural characterization of $[NMe_4]_4[(CuCl)_5Cl_2WS_4]$, a double cubane-like complex, 3055–8

COBALT
The pH and temperature dependent hydrolyses of [*N*,*N*-bis(2-aminoethyl)-1,2-ethanediamine]bis(solvent)cobalt(III) and bis(dimethylformamide)(1,4,7,10-tetra-azacyclododecane)cobalt(III) complexes, 47–52
An investigation of non-stoicheiometry in the systems $SrFeO_{3-y}$ and $SrCoO_{3-y}$ by iron and cobalt *K*-edge extended *X*-ray absorption fine structure spectroscopy, 83–8
Low-spin six-co-ordinate cobalt(II) complexes. A solution study of tris(violurato)cobaltate(II) ions, 101–4
Structural study of a new type of B_{12} model involving a non-symmetrical equatorial ligand; aquaethyl[*N*,*N*′-ethylene(acetylacetoneiminato)](salicylideneiminato)cobalt(III), 129–32
Synthesis and spectral characterization of cobalt(III) complexes of *N*-(*o*-carboxyphenyl)iminodiacetic acid, 159–62
Spectrophotometric and conductometric study of cobalt(II) bromide–dimethyl sulphoxide solutions, 369–72
Calorimetric study on oxygen addition to cobalt(II) complexes with tris(2-aminoethyl)amine and 3,7-diazanonane-1,9-diamine, 373–80
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 421–6
Side-on bonded nitrosobenzene bridging two metal atoms, in a binuclear cyclopentadienyl cobalt complex: crystal structure of $[\{Co(cp)\}_2(\mu\text{-}PhNO)_2]$, 545–8
Possible biological activity in proton, metal, and aminohydroxamic acid equilibria. Protonation and complex formation reactions between *N*-hydroxy-D-asparagine and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 953–60
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution **(1988, 421)**, 1107
Reorientation of the alkyne moiety in the heterometallic cluster $[FeCo_2(CO)_9(EtC_2Et)]$, induced by phosphine, phosphite, or isonitrile substitution for CO. Crystal structure of $[FeCo_2(CO)_8(PPh_3)(EtC_2Et)]$, 1249–58
Mixed metal complexes in solution. Part 5. Equilibrium and conformational study of heterobinuclear metal(II) isoserine complexes in aqueous solution, 1267–72
Interaction of metal ions with 6-oxopurine nucleotides. Part 1. *X*-Ray structures of ternary cobalt(III) complexes with inosine 5′-monophosphate or guanosine 5′-monophosphate, 1297–302
Cerium(IV)-induced decarboxylation of penta-ammine oxaloacetatocobalt(III) perchlorate, 1413–6
Reaction of $[FeCo(CO)_7(\mu\text{-}CH{=}CRH)]$ (R = H or Ph) with dimethylphenylphosphine. Synthesis and structure of $[FeCo(CO)_4(\mu\text{-}CO)(PMe_2Ph)_2(\mu\text{-}CH{=}CH_2)]$, an electronically unbalanced iron–cobalt complex, 1417–20
Allylation of cobalt-co-ordinated cyclo-octatetraene by the $[Fe\{P(OMe)_3\}(NO)_2(\eta^3\text{-allyl})]^+$ cation: ring closure to 1,2,3,3a-tetrahydropentalenyl derivatives and the *X*-ray structure of $[Co(\eta^5\text{-}C_9H_8R)(\eta\text{-}C_5Me_5)][PF_6]$ [R = $CH_2C(Me){=}CH_2$], 1631–6
Significant phosphine ligand effect on the photochemical reactivity of $[Cu(N\text{–}N)L_2]^+$ (N–N = 1,10-phenanthroline or 2,9-dimethyl-1,10-phenanthroline; L = tertiary phosphine), 1641–4
Studies involving mixed-donor macrocyclic ligands. A comparative study of the influence of medium effects on the stabilities of complexes of Co^{II}, Ni^{II}, and Cu^{II} with 14- to 16-membered O_2N_2-donor macrocycles, 1733–6
Resonance-Raman spectra of nitro cobalt(III) complexes: $K_3[Co(NO_2)_6]$, $Na_3[Co(NO_2)_6]$, *trans*-$[NH_4][Co(NO_2)_4(NH_3)_2]$, and *trans*-$[Co(NO_2)_2(NH_3)_4]NO_3$, 1827–32
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$, 1867–78
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 75. Reactions of octacarbonyldicobalt with the salts $[X][W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$ (X = NEt_4 or PPh_4; R = Me, Ph, C_6H_4Me-2, or C_6H_4Me-4); crystal structure of $[PPh_4][Co_2W(\mu_3\text{-}CPh)(CO)_8(\eta^5\text{-}C_2B_9H_9Me_2)]\cdot 0.5CH_2Cl_2$, 1891–8

COBALT (contd)
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4), 1899–906
Electrochemical studies of nickel(II) and cobalt(II) complexes of tetra-azamacrocycles bearing a pyridine functional group and *X*-ray structures of $[Ni^{II}(L^3)Cl]ClO_4$ and $[Ni^{II}(L^3)][ClO_4]_2 \cdot H_2O$ {L^3 = *meso*-2,3,7,11,12-pentamethyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 2153–60
Kinetic studies of the reduction of nickel oxime complexes by tris(1,10-phenanthroline)cobalt(II) and hydroquinone in aqueous media, 2279–86
Template reactions of 1,4-bis(α-carboxybenzylidenehydrazino)phthalazine with cobalt(II), nickel(II), and chromium(III), 2293–6
Preparation and redox properties of the cuboidal molybdenum(III) aqua ion $[Mo_4S_4(H_2O)_{12}]^{4+}$, 2579–84
Transition-metal carbonyl derivatives of the germanes. Part 17. Tetracarbonylgermyl(trimethylgermyl)iron, $[Fe(CO)_4(GeH_3)(GeMe_3)]$, its conversion into $[\{Fe(CO)_4(GeH_2)\}_2]$, and hence to $[Co_4Fe_2Ge_2(CO)_{21}]$ (characterised by *X*-ray crystallography) *via* $[Co_4Fe_2Ge_2(CO)_{22}]$, 2629–34
Co-ordination kinetics of some aliphatic amines towards the photogenerated transient '$CoH\{PPh(OEt)_2\}_3$', 2675–6
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$ **(1988, 1867)**, 2683
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4) **(1988, 1899)**, 2683
Synthesis and structures of phosphinidene and phosphido complexes of iron and cobalt, 2713–22
The syntheses and electrochemistry of some molybdenum mononitrosyl complexes containing the tripodal ligand $[Co(\eta^5\text{-}C_5H_5)\{P(=O)(OEt)_2\}_3]^-$, 2769–74
Synthesis of heterobimetallic complexes containing cobalt–platinum or rhodium–platinum dative bonds. Molecular structure of $[(\eta^5\text{-}C_5H_5)(CO)_2Rh\rightarrow Pt(C_6F_5)_2(CO)]$, 3005–10
CONDUCTIVITY
X-Ray crystal structure and properties of tetrathiafulvalenium dicarbonyldichlororhodate(I), 253–6
Spectrophotometric and conductometric study of cobalt(II) bromide–dimethyl sulphoxide solutions, 369–72
X-Ray crystal structure of bis(*N*-ethylpyridinium) bis[4,5-dimercapto-1,3-dithiole-2-thionato(2−)]cuprate(II) and electrical properties of its oxidized salts, 967–72
Axial co-ordination and ion-pair formation for *R,S,R,S*-1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecanenickel(II) perchlorate in various mixed solvents with nitrobenzene, 1935–42
CONFORMATION
Temperature study of the solution conformations of aqueous lanthanide(III) complexes containing monodentate ligands, 2315–22
COPPER
Crown thioether chemistry. Synthesis and structural investigation of 1,5,9-trithiacyclododecane (trithia-12-crown-3) and its copper(II) chloride adduct, 93–6
Synthesis, crystal and molecular structure of tetraphenylarsonium bis(maleonitriledithiolato)tellurate(II), $[AsPh_4]_2[Te(mnt)_2]$, and single-crystal electron spin resonance spectra of the system $[AsPh_4]_2[Cu/Te(mnt)_2]$, 97–100
The crystal structures, magnetic and electrical properties of two polymeric chlorocuprate(II) compounds, 265–72
Synthesis of Group 1B sandwich cluster compounds with $[Pt_3(\mu\text{-}CO)_3(PPh_3)_3]$ and the structural characterisation of $[M\{Pt_3(\mu\text{-}CO)_3(PPh_3)_3\}_2]PF_6$ (M = Au or Cu) by single-crystal *X*-ray techniques, 335–40
Dicopper(I) complexes containing intramolecular 1,2-diaza bridging ligands. Behaviour of the dicopper site in the dehydrogenation of hydrazobenzene. Crystal structure of $[Cu_2L^2(pydz)_2][ClO_4]_2$, 347–52
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 421–6
Synthesis, reactions and copper(II), nickel(II), and zinc(II) complexes of *N*-(2-pyridinyl)ketothioacetamides, 433–44
Synthesis of a thirteen-membered tetra-azamacrocycle employing formaldehyde and nitroalkanes directed by metal ions. Crystal structures of (12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)copper(II) perchlorate and μ-chloro-1,1,1-trichloro-2-(12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)dicopper(II), 497–502
Solvent effects on the protonation constants of *N,N'*-bis(2-carbamoylethyl)ethylenediamine and the equilibrium constants for its copper(II) complexes in methanol–water mixtures, 541–4
Unusual changes in hyperfine coupling constants observed for copper(II) complexes with *N,N*-bis(benzimidazol-2-ylmethyl)amine and its homologues; *X*-ray crystal structure determinations of $[CuL^{Pr}(NO_3)(MeOH)]NO_3$, $[CuL^{Bu^t}(NO_3)(MeOH)]NO_3$, $[CuL^{Bu^t}(NO_3)]NO_3$, and $[CuL^{Bu^t}(NO_3)]NO_3$, 691–700
Oxidation of ascorbic acid by copper(II) and the ferrocenium ion in acetonitrile–water mixtures, 733–40
The heteronuclear cluster chemistry of the Group 1B metals. Part 6. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (M = Cu or Ag, n = 1—6). *X*-Ray crystal structures of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 2, 3, or 5), 757–68
Bimetallic complexes of platinum, rhodium, or copper bridged by $Ph_2PCH_2PPh_2$ or $Ph_2PC(=CH_2)PPh_2$ to diazenidorhenium groups; crystal structure of $[(4\text{-}MeC_6H_4N_2)ClRe(\mu\text{-}dppm)_2(\mu\text{-}CO)PtCl]\cdot 2Me_2CO$, 769–74
Copper(II) complexes of tetradentate Schiff-base ligands derived from aminothioetherimidazoles. Crystal structure determination of {*N*-2-[(5′-methylimidazol-4′-yl)methylthio]ethylsalicylideneiminato(1−)-*O,N,N',S*}copper(II) perchlorate, 839–46
A potentiometric and spectroscopic study of the interaction of angiotensin II and some of its peptide fragments with copper(II), 887–94
Co-ordination behaviour of *N*-protected aspartic acid in binary and ternary copper(II) complexes. Crystal and molecular structure of [*N*-acetyl-L-aspartato(2−)-*O*']bis(2,2′-bipyridine)copper(II)-ethanol tetrahydrate, 909–12
Synthesis, reactivity, and spectroscopic studies of some tetranuclear osmium clusters. Structural characterization of $[Os_4H(CO)_{12}\{\mu_3\text{-}NC(O)Me\}\{M(PPh_3)\}]$ (M = Au or Cu) and $[N(PPh_3)_2][Os_4H_2(CO)_{12}I]$, 913–24
Dinuclear metal complexes. Part 8. Effect of remote substituents on the redox potentials of mono- and di-nuclear copper(II) complexes, 935–42
Possible biological activity in proton, metal, and aminohydroxamic acid equilibria. Protonation and complex formation reactions between *N*-hydroxy-D-asparagine and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 953–60
X-Ray crystal structure of bis(*N*-ethylpyridinium) bis[4,5-dimercapto-1,3-dithiole-2-thionato(2−)]cuprate(II) and electrical properties of its oxidized salts, 967–72
Synthesis, characterization, and *X*-ray crystal structures of mononuclear copper(II) complexes with unsymmetrical quadridentate ligands involving an imidazole moiety and discrete imidazolate-bridged binuclear copper(II) complexes with non-identical co-ordination geometries in the binuclear unit, 1021–36
The electrochemical synthesis of neutral copper(II) complexes of Schiff base ligands: the crystal structure of bis{*N*-[2′-2″-pyridyl]ethyl]-4,6-dimethoxysalicylideneiminato}copper(II), 1059–62
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution **(1988, 421)**, 1107
Thermodynamic and spectrophotometric study of copper(II) and cadmium(II) homo- and hetero-nuclear complexes with L-histidylglycine in an aqueous medium, 1115–20
Mixed-metal carbido carbonyl clusters. Part 3. Synthesis and structural characterization of $[Rh_6C(CO)_{15}\{Ag(NCMe)\}_2]\cdot 0.5MeOH$, $[Rh_6C(CO)_{15}\{M(PPh_3)\}_2]$ (M = Cu, Ag,

COPPER (contd)
or Au), and of the anion $[Rh_6C(CO)_{15}\{Au(PPh_3)\}]^-$ as its PPh_4^+ salt, 1237–48
Thermodynamic and spectroscopic studies on the protonation and Cu^{2+} complex formation of a synthetic amino diacid: (3-aminopropyl)malonic acid, 1273–80
Synthesis, spectroscopy, and crystal structure of a thiocyanato-bridged mixed-valence copper(I)–copper(II) compound with the ligand 1,6-bis(5′-methylimidazol-4′-yl)-2,5-dithiahexane, 1337–40
Copper(II) complexes with some tetrapeptides containing the 'break-point' prolyl residue in the third position, 1357–60
Co-ordination chemistry of higher oxidation states. Part 26. Spectroscopic studies of tellurate complexes of the trivalent Group 1B metals. *X*-Ray structure of $Na_5[Cu\{TeO_4(OH)_2\}_2]\cdot 16H_2O$, 1377–82
Electroanalytical and spectrophotometric investigations on the metal(II)-1,2-bis(diphenylphosphino)ethane–acetylacetonate system (M = Ni, Pd, or Cu) in acetonitrile, 1425–8
Copper(II) and zinc(II) co-ordination compounds of tridentate bis(benzimidazole)pyridine ligands. Crystal and molecular structures of bis[2,6-bis(1′-methylbenzimidazol-2′-yl)pyridine]copper(II) diperchlorate monohydrate and (acetonitrile)[2,6-bis(benzimidazol-2′-yl)pyridine](perchlorato)copper(II) perchlorate, 1429–36
Chemical reaction of metallic copper with imidazole, 1487–8
Bis(acetato)bis[4-(*N*-acetylamino)pyridine]aquacopper(II)–hydrogen fluoride–hydrate (1/2/2): *X*-ray structure reveals $H_2O\cdot HF$ hydrogen bonded in the lattice, 1493–6
Studies on metal complexes of *ortho*-quinone mono-oximes. Part 6. Redox behaviour of bis(4-chloro-1,2-benzoquinone 2-oximato)-copper(II) and -nickel(II); synthesis and characterization of reduced species containing a paramagnetic ligand, 1497–500
Preparation, molecular structure, and stereochemical properties of copper(II) complexes co-ordinated to (3*S*)- and (*RS*)-3-aminopiperidine: effect of ring size on stereochromism, 1543–8
Association and orientation of copper(II) tetra-t-butylphthalocyaninate in multilayer Langmuir–Blodgett films as determined by electron paramagnetic resonance spectroscopy, 1583–90
Structurally diversified neutral copper(I) isocyanide complexes: mono- and bi-nuclear complexes from the reaction of copper(I) halides with *p*-tolyl isocyanide, 1599–606
A reactive and versatile fourteen-electron copper(I) fragment for binding carbon monoxide, isocyanides, and phosphines: synthesis, crystal structure, and reactivity of (2-methylquinolin-8-olato)copper(I) derivatives, 1607–16
Lewis base adducts of Group 11 metal(I) compounds. Part 36. The synthesis and *X*-ray crystallographic characterisation of polymeric copper(I) iodide–benzonitrile (2/1), 1637–40
Significant phosphine ligand effect on the photochemical reactivity of $[Cu(N\text{–}N)L_2]^+$ (N–N = 1,10-phenanthroline or 2,9-dimethyl-1,10-phenanthroline; L = tertiary phosphine), 1641–4
Co-ordinative abilities of ligands which favour S,S chelation: copper(I) halide complexes of *N*,*N*′-diphenyldithiomalonamide. The crystal and molecular structure of bis(*N*,*N*′-diphenyldithiomalonamide)copper(I) iodide–methanol (2/1), 1713–8
Studies involving mixed-donor macrocyclic ligands. A comparative study of the influence of medium effects on the stabilities of complexes of Co^{II}, Ni^{II}, and Cu^{II} with 14- to 16-membered O_2N_2-donor macrocycles, 1733–6
Binuclear nickel(II) and copper(II) complexes containing an endogenous alkanethiolato-bridging sulphur atom and exogenous μ-pyrazolate (pz) group. Crystal structure of $[Ni_2L(pz)]$ [L = *NN*′-3-mercaptopentane-1,5-diylbis(salicylideneiminate)(3−)], 1823–6
Synthesis and structural study of (2,2′-bipyridine)perchlorato(styrene)copper(I), 1907–10
A novel 'tent-like' structure of a copper(I) aggregate. The crystal and molecular structure of nona[*N*-diethoxythiophosphoryl)-*N*′-phenylisothioureato]decacopper(I) perchlorate, 1915–20
Synthesis and *X*-ray crystal structures of an imidazolate-bridged polynuclear copper(II) complex exhibiting a unique helicoid structure and its precursor mononuclear complex, 1943–8
Synthesis of new heteronuclear complexes with bridging carbyne ligands between tungsten and gold. *X*-Ray crystal structure of $[AuW(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_2(bipy)(C_6F_5)Br]$, 1957–62
Reaction between 1,3-diphenylisobenzofuran and a blue oxyhaemocyanin model compound, 2003–4
Copper(II)-assisted hydrolysis of 2,4,6-tris(2-pyridyl)-1,3,5-triazine. Part 1. Crystal structures of [bis(2-pyridylcarbonyl)amido](2-pyridylformamide)copper(II) perchlorate monohydrate and [bis(2-pyridylcarbonyl)amido]copper(II) perchlorate, 2033–40
Transition metal complexes of substituted 2,2′-biquinolines. Part 1. The crystal and molecular structures of [8,8′-bis(aminomethyl)-2,2′-biquinoline]dichloromanganese(II) and [8,8′-bis(aminomethyl)-2,2′-biquinoline]chlorocopper(II) chloride, 2121–6
Comparisons of thirteen- to sixteen-membered tetra-azacycloalkane copper(II) complexes derived from template syntheses involving nitroethane and formaldehyde. Crystal structures of (10-methyl-10-nitro-1,4,8,12-tetra-azacyclopentadecane)copper(II) and (3-methyl-3-nitro-1,5,9,13-tetra-azacyclohexadecane)copper(II) perchlorates, 2145–52
Syntheses and reactivity of acetylide-containing clusters of Group 1B metals. Stepwise syntheses of trinuclear $[Au_2Cu(C_2Ph)_4]^-$ and pentanuclear $[Au_3Cu_2(C_2Ph)_6]^-$ and $[Au_3Ag_2(C_2Ph)_6]^-$ clusters, 2297–300
The triphenylphosphine adduct of a copper(I) complex involving an incompletely bound N_2S_2 macrocyclic ligand, 2301–6
Thermodynamic and kinetic studies on the complexation reactions of copper(II) with *NN*′-bis(β-carbamoylethyl)-*trans*-cyclohexane-1,2-diamine, 2495–500
Reactions of 1,2-dicarbonyls with metallic copper under argon and dioxygen. Oxidative C–C bond scission by metallic copper, 2663–8
Intermolecular dimerisation of copper porphyrins and their radical cations. An electron spin resonance study, 2681–2
Crystal structure and magnetic properties of the complex $[Cu(en)_2]_2[\{Fe(edta)\}_2O]\cdot 2H_2O$. A heterobimetallic Cu^{II}– Fe^{III} system containing a μ-oxo-di-iron(III) moiety, 2747–52
The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_nEPh_2\}(CO)_{12}]$ (M = Cu or Ag; E = As or P; *n* = 1 or 2). *X*-Ray crystal structure of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_2PPh_2\}(CO)_{12}]$, 2787–96
Complexes of ligands providing endogenous bridges. Part 6. The *X*-ray crystal structure and magnetic properties of a hexanuclear copper(II) aggregate bearing μ_3-$Cu_3(OH)$ cores supported by 4-nitro-2,6-bis[(salicylideneamino)methyl]-phenolate ligands, 2817–24
Synthesis and characterization of the novel copper(I) anion $[Cu(PPh_3)Br_2]^-$, 2825–30
Synthesis and co-ordination chemistry of two penta-azamacrocycles containing a 1,4-piperazine backbone. Crystal structure determinations of 6,12-dioxo-1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-triene and 1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-trienenickel(II) perchlorate, 2959–64
Dicopper(II) complexes of a binucleating N_4 macrocycle containing mono- and di-atomic bridges; magnetic interactions mediated by alkoxo- and diaza-bridging ligands. Crystal structures of $[Cu_2(L^1)(pz)_2][ClO_4]_2$, $[Cu_2(L^1)(OEt)_2(NCS)_2]$, and $[Cu_2(L^1)(OMe)_2(MeCN)_2][BPh_4]_2$, 2995–3004
Crystal structures and magnetic properties of the mono-μ-halogeno-bridged copper(II) chains Cu(pcpci)X [pcpci = *N*-(2′-pyridylcarbonyl)pyridine-2-carboximidate, X = Cl or Br], 3041–6
Heterobimetallic clusters derived from $[MS_4]^{2-}$ (M = Mo or W): synthesis and structural characterization of $[NMe_4]_4[(CuCl)_5Cl_2WS_4]$, a double cubane-like complex, 3055–8
Reactions of 1,2-dicarbonyls with metallic copper under argon and dioxygen. Oxidative C–C bond scission by metallic copper (**1988, 2663**), 3063

CROWN ETHER
f-Element–crown ether complexes. Part 9. The role of solvent hydrogen bonding: synthesis and crystal structure of aquatetrachlorotris(ethanol)thorium(IV)–1,4,7,10,13,16-hexaoxacyclo-octadecane–water (1/1/1), 13–6
Synthesis and characterization of metal-free and metal derivatives of a novel soluble crown-ether-containing phthalocyanine, 401–6
Some observations on the mechanism of passive transport, 1293–6
Effects of sodium ions on the molecular dynamics of bis(aza-15-crown-5)thiuram disulphide, 1697–700
Uncommon complex stoicheiometry in solvent extraction: solution-phase dicationic complex formation of crown ethers, 2735–8

CROWN ETHER (contd)
Synthesis and characterization of a crown-ether substituted salicylaldimine Schiff-base ligand and its complexes with cobalt(II), copper(II), nickel(II), and uranyl(VI), 2831–6
CROWN THIOETHER
Crown thioether chemistry. Synthesis and structural investigation of 1,5,9-trithiacyclododecane (trithia-12-crown-3) and its copper(II) chloride adduct, 93–6
CRYSTAL STRUCTURE
f-Element–crown ether complexes. Part 9. The role of solvent hydrogen bonding: synthesis and crystal structure of aquatetrachlorotris(ethanol)thorium(IV)–1,4,7,10,13,16-hexaoxacyclo-octadecane–water (1/1/1), 13–6
Reactions of acetylenes with noble metal carbonyl halides. Part 10. Synthesis and *X*-ray structural characterization of a new substituted diplatina-dioxapentalene complex $[Cl(CO)Pt\{CMe{=}C(\overline{COOMe})C(=O)\}\overline{PtCl(PPh_3)}]$, 17–22
Synthesis and structural studies of dimethylindium(III) complexes with polydentate nitrogen donor ligands, and of monomethylindium(III) complexes containing alkoxide-bridged binuclear cations, 35–46
Synthesis and reactions of d^0 imido aryl derivatives of chromium, molybdenum, and tungsten. Crystal structures of $Cr(NBu^t)_2(C_6H_2Me_3\text{-}2,4,6)_2$, $Mo(NBu^t)_2(C_6H_3Me_2\text{-}2,6)_2$, and $Cr(NBu^t)_2[C(C_6H_2Me_3\text{-}2,4,6){=}NBu^t](C_6H_2Me_3\text{-}2,4,6)$, 53–60
Conjugate addition of acetylides to complexes of type $[M(CO)_4\{(Ph_2P)_2C{=}CH_2\}]$ (M = Cr, Mo, or W): crystal structure of $[M(CO)_4\{(Ph_2P)_2C{=}CHCH{=}CHPh\}]$ formed by the base-catalysed isomerization of $[M(CO)_4\{(Ph_2P)_2CHCH_2C{\equiv}CPh\}]$, 89–92
Crown thioether chemistry. Synthesis and structural investigation of 1,5,9-trithiacyclododecane (trithia-12-crown-3) and its copper(II) chloride adduct, 93–6
Synthesis, crystal and molecular structure of tetraphenylarsonium bis(maleonitriledithiolato)tellurate(II), $[AsPh_4]_2[Te(mnt)_2]$, and single-crystal electron spin resonance spectra of the system $[AsPh_4]_2[Cu/Te(mnt)_2]$, 97–100
Structural study of a new type of B_{12} model involving a non-symmetrical equatorial ligand; aquaethyl[*N*,*N*′-ethylene(acetylacetoneiminato)](salicylideneiminato) cobalt(III), 129–32
Synthesis and thermal decomposition of palladacyclopentane derivatives of the type $[\overline{Pd(CH_2CHRCHRCH_2)L_2}]$ (R = H or Me). *X*-Ray crystal structure of $[\overline{Pd(CH_2CH_2CH_2CH_2)}(bipy)]$, 133–40
o-Nitrophenylpalladium(II) complexes. Crystal and molecular structures of *cis*-$[Pd\{o\text{-}C_6H_4N(O)O\}_2]$ and *cis*-$[\overline{Pd\{o\text{-}C_6H_4N(O)O\}}(o\text{-}C_6H_4NO_2)(py)]$, 141–8
A case of solid–state isomerism for a rhodium carbonyl cluster anion. Synthesis, characterization in solution and *X*-ray crystallographic structures of the salts $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot Me_2CO$ and $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot C_6H_5Me$, 163–72
Stepwise construction of $[Os_6(CO)_{18}(\mu_6\text{-}P)]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of $[Os_6(\mu\text{-}H)_2(CO)_{20}(MeCN)(\mu_3\text{-}PH)]$ and $[PPh_3Me][Os_6(CO)_{18}(\mu_6\text{-}P)]$, 173–82
Synthesis and structural characterization of the molecular complex between bismuth trichloride and pyrene, 191–4
Nickel–iridium carbonyl clusters. Synthesis and solid-state structure of the trianion $[Ir_3Ni_6(\mu\text{-}CO)_6(\mu_3\text{-}CO)_2(CO)_9]^{3-}$. The first example of a mixed iridium–nickel carbonyl cluster, 201–6
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 69. Reactions of $[MoW(\equiv CC_6H_4Me\text{-}4)(CO)_7(\eta\text{-}C_5H_5)]$ with but-2-ene; crystal structures of $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)\}(CO)_3(\eta\text{-}MeC_2Me)_2(\eta\text{-}C_5H_5)]$ and $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C({=}CH_2)C(H)MeC(O)\}(CO)_6(\eta\text{-}C_5H_5)]\cdot 0.5CH_2Cl_2$, 207–14
X-Ray crystal structure identification of the ternary complex $MgCl_2\cdot 2SbCl_3\cdot 6MeCN$, 215–8
triangulo-Trirhenium(III) alkyl compounds. The *X*-ray crystal structures of $Re_3(\mu\text{-}Cl)_{1.5}(\mu\text{-}Me)_{1.5}(CH_2Ph)_6$ and $Re_3(\mu\text{-}Me)_3(CH_2Ph)_6$, 219–26
Rhodium(III) complexes with pyridine-2-thiol (pySH) and pyridine-2-thiolato (pyS) as the only ligands: crystal structures of *mer*-$[Rh(pyS)_3]$, $[Rh(pyS)_2(pySH)_2]Cl\cdot 0.5H_2O$, and $[Rh(pyS)_3(pySH)]$, 227–34
$[RhPd_2(pyS)_4(\eta^3\text{-}C_4H_7)_2][BF_4]$: Synthesis and *X*-ray structure of a mixed-metal trinuclear complex containing two μ_3-pyridine-2-thionato (pyS) ligands, 235–8
Studies on ruthenium(II) macrocyclic amine complexes. Synthesis and *X*-ray structure of the (*R*,*S*,*R*,*R*) isomer of *trans*-$[Ru^{II}(L)(N_3)(NCMe)]PF_6$ (L = 1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecane), 239–42
X-Ray crystal structure and properties of tetrathiafulvalenium dicarbonyldichlororhodate(I), 253–6
Metal complexes of *N*-aryl-*N*-nitrosohydroxylamines: cleavage of N–N bonds to give metal nitrosyl species and organonitrogen compounds, and the crystal structure of $[RhCl_2\{ONN(C_6H_4Me\text{-}p)O\}(H_2O)(PPh_3)]\cdot 0.5Me_2CO$, 257–64
The crystal structures, magnetic and electrical properties of two polymeric chlorocuprate(II) compounds, 265–72
An improved route to the synthesis of μ-(alkane- or arene-thiolato)(μ-ethenyl)di-iron complexes. Crystal structure of μ-phenylmethanethiolato-μ-(1,2-diphenylethenyl)-hexacarbonyldi-iron(*Fe–Fe*), 281–4
Crystal and molecular structure of bis(tetraphenylphosphonium) bis(1,2-dicyanoethylene-1,2-dithiolato)oxovanadate(IV). Its single-crystal electron spin resonance as a pure compound and diluted in the isomorphous molybdenum(IV) compound, 309–14
Synthesis of Group 1B sandwich cluster compounds with $[Pt_3(\mu\text{-}CO)_3(PPh_3)_3]$ and the structural characterisation of $[M\{Pt_3(\mu\text{-}CO)_3(PPh_3)_3\}_2]PF_6$ (M = Au or Cu) by single-crystal *X*-ray techniques, 335–40
Synthesis of pentafluorophenyl(ylide)silver(I) complexes: *X*-ray structures of two modifications of $[Ag(C_6F_5)(CH_2PPh_3)]$, 341–6
Dicopper(I) complexes containing intramolecular 1,2-diaza bridging ligands. Behaviour of the dicopper site in the dehydrogenation of hydrazobenzene. Crystal structure of $[Cu_2L^2(pydz)_2][ClO_4]_2$, 347–52
Complexes of functional phosphines. Part 11. β-Ketophosphine complexes of nickel, palladium, and platinum. Crystal structures of *trans*-$[NiX_2(HL)_2]$ [X = Cl or I, HL = $Ph_2PCH_2C(O)Ph$], 353–62
Synthesis, structure, and spectroscopic and magnetic properties of *catena*-μ-aqua-diaquabis(2,6-dimethoxybenzoato)metal(II) monohydrate complexes of manganese, cobalt, nickel, and zinc. *X*-Ray crystal structure of $[Co(dmba)_2(H_2O)_3]\cdot H_2O$, 363–8
Some sterically hindered lithium alkylbromo- and alkylchloro-magnesates, -cadmates, and -manganates. Crystal and molecular structures of $[Li(thf)_2(\mu\text{-}Br)_2Mg\{C(SiMe_3)_3\}(thf)]$, $[Li(thf)_4][\{Cd(SiMe_3)_3\}_3(\mu\text{-}Br)_3(\mu_3\text{-}Br)]\cdot 0.5C_6H_{12}$, $[\{Li(thf)\}_3(\mu_3\text{-}Br)_3(\mu_3\text{-}OSiMe_3)Cd\{C(SiMe_3)_3\}]$, and $[Li(thf)_4][\{Mn[C(SiMe_3)_3]\}_3(\mu\text{-}Cl)_4(thf)]$ (thf = tetrahydrofuran), 381–92
Preparation and characterization of diorgano- and dihalogeno-bis(monothio-β-diketonato)tin(IV) complexes. Crystal and molecular structures of $SnY_2(btbm)_2$ and $SnY_2(tacac)_2$ (Y = Me or Cl), 407–14
Complexes of the platinum metals. Part 33. Synthesis of some ruthenium and osmium sulphonate derivatives: *X*-ray crystal structure of aqua(carbonyl)bis(toluene-*p*-sulphonato)bis(triphenylphosphine)ruthenium(II), 415–20
Chemistry of metallacyclobutanones. Part 4. The synthesis of 1,3-diphenyl-substituted oxodimethylenemethane complexes of platinum(II) and palladium(II) *via* the dianion $[PhCHC(O)CHPh]^{2-}$, and the *X*-ray crystal structure of $[Pt\{\eta^3\text{-}CHPhC(O)CHPh\}(AsPh_3)_2]\cdot 2CH_2Cl_2$, 427–32
Sulphonation of palladium–carbon bonds: synthesis and *X*-ray crystal structures of the disulphinato derivatives $[\overline{Pd\{S(O)_2CH_2CH_2CH_2CH_2S(O)_2\}}(tmen)]$ (tmen = $Me_2NCH_2CH_2NMe_2$) and $[Pd\{S(O)_2Me\}_2(tmen)]$, 461–8
The crystal structure of nonachlorodimolybdenum(V) heptachlorodioxodimolybdate(V), 485–8
The solution behaviour of $[Rh_2(COMe)_2(CO)_2I_6]^{2-}$, its reactions with CO, pyridine, and methanol, and the *X*-ray structure of $[AsPh_4][Rh(COMe)(CO)(NC_5H_5)I_3]$, 489–96
Synthesis of a thirteen-membered tetra-azamacrocycle employing formaldehyde and nitroalkanes directed by metal ions. Crystal structures of (12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)copper(II) perchlorate and μ-chloro-1,1,1-

CRYSTAL STRUCTURE (contd)
trichloro-2-(12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)dicopper(II), 497–502
Stereochemical non-rigidity of dithioether complexes of trimethylplatinum(IV) halides. *X*-Ray crystal structures of $[PtClMe_3(MeSCH_2CH_2SEt)]$ and $[PtIMe_3(MeSCH_2CH_2SBu^t)]$, 521–32
Synthesis and crystal structure of tris[bis(trimethylsilyl)amido]oxoniobium(V): a four-co-ordinated oxo niobium precursor, 533–6
Side-on bonded nitrosobenzene bridging two metal atoms, in a binuclear cyclopentadienyl cobalt complex: crystal structure of $[\{Co(cp)\}_2(\mu\text{-}PhNO)_2]$, 545–8
Synthesis, single-crystal *X*-ray structures, and fluxional behaviour of 1,2-$[Os_3(CO)_{10}(\mu\text{-dppe})]$ and its protonated derivative 1,2-$[Os_3(\mu\text{-}H)(CO)_{10}(\mu\text{-dppe})][PF_6]$ where dppe = $Ph_2PCH_2CH_2PPh_2$, 579–86
A novel co-ordination mode for the squarate ligand [dihydroxycyclobutenedionate(2−)]: synthesis, crystal structure, and magnetic properties of *catena*-diaqua(2,2′-bipyridyl)-μ-(squarato-O^1,O^2)-nickel(II) dihydrate, 587–90
Technetium(V) and rhenium(V) complexes with Schiff-base ligands containing the ONNNO donor atom set. Crystal structure of [*N*,*N*′-3-azapentane-1,5-diylbis(salicylideneiminato)(3−)-*O*,*O*′,*N*,*N*′,*N*″]oxotechnetium(V), 611–6
Syntheses and solid-state structures of trimeric dibenzylamidolithium and its diethyl ether and hexamethylphosphoramide dimeric complexes: an explanation of these structures and evidence for Li ··· CH interactions in both solid and solution phases, 617–28
Reactivity of cationic molybdenum(II) complexes. Part 2. Electrochemical reduction of the eighteen-electron complexes $[Mo(CO)_3(\eta^5\text{-}C_5Me_5)L]^+$ [L = CO, *p*-MeC_6H_4NC, or $P(OMe)_3$]. Crystal structure of $[Mo_2(CO)_6(\eta^5\text{-}C_5Me_5)_2]$, 635–40
Iridium(III) *cis*-dihydrido complexes with 3,6-bis(2′-pyridyl)pyridazine. Crystal structure of the pyridazinyl complex $[\{IrH_2(PPh_3)_2\}_2\{\mu\text{-}C_4HN_2(C_5H_4N)_2\text{-}3,6\}]PF_6$, 651–6
Formation and structure of $[Ni_3(\mu_3\text{-}S)(\mu\text{-}SMe)_3(SMe)_3]^{2-}$, a cyclic trinuclear metal–sulphide–thiolate cluster with simple monofunctional thiolate ligands, 657–60
Synthesis of homoleptic tetrahedral aryls of rhenium(IV) and ruthenium(IV). *X*-Ray crystal structures of tetrakis(*o*-methylphenyl)rhenium(IV) tetrakis(*o*-methylphenyl)oxorhenium(VI), and tetrakis(*o*-methylphenyl)ruthenium(IV), 669–74
Unusual changes in hyperfine coupling constants observed for copper(II) complexes with *N*,*N*-bis(benzimidazol-2-ylmethyl)amine and its homologues; *X*-ray crystal structure determinations of $[CuL^{Pr^i}(NO_3)(MeOH)]NO_3$, $[CuL^{Bu^t}\text{-}(NO_3)(MeOH)]NO_3$, $[CuL^{Bu^n}(NO_3)]NO_3$, and $[CuL^{Bu^t}(NO_3)]NO_3$, 691–700
Organo–platinum–iron complexes containing one bridging $Ph_2PCH_2PPh_2$ ligand. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CO)Pt(PPh_3)]$, $[(OC)_2Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)C_2H_2\}Pt(PPh_3)]$, and $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CMe{=}CH_2)\text{-}Pt(PPh_3)][BF_4]$, 741–50
The heteronuclear cluster chemistry of the Group 1B metals. Part 5. *X*-Ray crystal structure and dynamic behaviour of the heptanuclear mixed-metal cluster $[Au_3Ru_4(\mu\text{-}H)(CO)_{12}(\mu\text{-}Ph_2PCH_2PPh_2)(PPh_3)]$, 751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 6. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster complexes $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (M = Cu or Ag, n = 1—6). *X*-Ray crystal structures of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 2, 3, or 5), 757–68
Bimetallic complexes of platinum, rhodium, or copper bridged by $Ph_2PCH_2PPh_2$ or $Ph_2PC(=CH_2)PPh_2$ to diazenidorhenium groups; crystal structure of $[(4\text{-}MeC_6H_4N_2)ClRe(\mu\text{-dppm})_2(\mu\text{-}CO)PtCl]\cdot 2Me_2CO$, 769–74
Solid-state structures of platinum–sulphur–nitrogen stacking compounds: $[Pt(S_2N_2)(PMe_2Ph)_2]$, $[Pt(S_2N_2H)(PMe_2Ph)_2]Cl$, $[Pt(S_2N_2H)(PMe_2Ph)_2]PF_6$, and $[Pd(S_2N_2H)(PMe_2Ph)_2]BF_4$, 803–8
The synthesis, using hexamethyldialuminium, and reactivity of new (1—5-η-cyclopentadienyl)methyl(nitrosyl)-molybdenum complexes. Crystal structure of bromo(η⁵-cyclopentadienyl)methyl(nitrosyl)(triphenylphosphine)-molybdenum, 819–26
Hydrido-clusters derived by protonation, hydrogenation, or photolytic decarbonylation of the chelating diphosphine compounds 1,1-$[Os_3(CO)_{10}(\text{diphosphine})]$ where diphosphine is $Ph_2PCH_2CH_2PPh_2$ or $Ph_2PCH_2CH_2CH_2PPh_2$, and crystal structure of $[OsH_2\{Ph_2P(CH_2)_3PC_6H_4\}(CO)_8]\cdot 0.5CH_2Cl_2$, 827–32
Copper(II) complexes of tetradentate Schiff-base ligands derived from aminothioetherimidazoles. Crystal structure determination of {*N*-2-[(5′-methylimidazol-4′-yl)methylthio]ethylsalicylideneiminato(1−)-*O*,*N*,*N*′,*S*}copper(II) perchlorate, 839–46
Synthesis and characterization of technetium(III) complexes with Schiff-base and phosphine ligands. Molecular structure of (diethylphenylphosphine)[*N*-(2-oxidophenyl)salicylideneiminato-*NOO*′](quinolin-8-olato-*NO*)technetium(III), 847–50
Rhodium complexes possessing the unidentate anion of 2,4-pentanedione as a ligand; *X*-ray crystal structure of carbonyl(2,4-pentanedionato-*O*)bis(tri-isopropylphosphine)rhodium(I), 895–8
Reactivity of rhenium(I) pseudo-allyl complexes with heterocumulenes. Part 2. Insertion reactions. Crystal structures of the thiazolyl-thioureido and -dithiocarbamato complexes $[Re(CO)_2(PPh_3)_2\{SC(NPh)NMe(C_3H_2NS)\}]\cdot CH_2Cl_2$ and $[Re(CO)_2(PPh_3)_2\{S_2CNMe(C_3H_2NS)\}]\cdot CH_2Cl_2$ (C_3H_2NS = thiazol-2-yl), 899–904
Co-ordination behaviour of *N*-protected aspartic acid in binary and ternary copper(II) complexes. Crystal and molecular structure of [*N*-acetyl-L-aspartato(2−)-*O*]bis(2,2′-bipyridine)copper(II)-ethanol tetrahydrate, 909–12
Synthesis, reactivity, and spectroscopic studies of some tetranuclear osmium clusters. Structural characterization of $[Os_4H(CO)_{12}\{\mu_3\text{-}NC(O)Me\}\{M(PPh_3)\}]$ (M = Au or Cu) and $[N(PPh_3)_2][Os_4H_2(CO)_{12}I]$, 913–24
Organoruthenaborane chemistry. Part 6. The reaction of $[\{Ru(\eta^6\text{-}C_6Me_6)Cl_2\}_2]$ with the *closo*-$[B_{10}H_{10}]^{2-}$ anion: characterisation of some *closo*-type eleven-vertex 1-ruthenaundecaboranes and the molecular structure of $[5\text{-}(\eta^6\text{-}C_6Me_6)\text{-}6\text{-}(OMe)\text{-}nido\text{-}5\text{-}RuB_9H_{12}]$, 925–30
X-Ray crystal structure of bis(*N*-ethylpyridinium) bis[4,5-dimercapto-1,3-dithiole-2-thionato(2−)]cuprate(II) and electrical properties of its oxidized salts, 967–72
Lewis-base adducts of main Group 1 metal compounds. Part 2. Syntheses and structures of $[Li_4Cl_4(pmdien)_3]$ and [LiI(pmdien)], 987–90
Lewis-base adducts of main Group 1 metal compounds. Part 3. Synthesis and structural systematics of $[LiXL_3]$ and $[L'_2LiX_2LiL'_2]$ systems (X = Cl, Br, or I; L = 3,5-$Me_2C_5H_3N$, L′ = 2-MeC_5H_4N), 991–6
Binucleating N_6 24- and 26-membered macrocyclic ligands. Part 2. Transition-metal homo- and hetero-binuclear complexes: *X*-ray crystallographic structure determination of a lead–manganese heterobinuclear complex, 1001–10
Synthesis and structural studies of [2-(6-methyl)pyridyl]- and (8-quinolyl)-trimethylsilylamido-lithium complexes, 1011–20
Synthesis, characterization, and *X*-ray crystal structures of mononuclear copper(II) complexes with unsymmetrical quadridentate ligands involving an imidazole moiety and discrete imidazolate-bridged binuclear copper(II) complexes with non-identical co-ordination geometries in the binuclear unit, 1021–36
The electrochemical synthesis of neutral copper(II) complexes of Schiff base ligands: the crystal structure of bis{*N*-[2′-2″-(pyridyl)ethyl]-4,6-dimethoxysalicylideneiminato}copper(II), 1059–62
Reactions of polysulphide with metal–phosphine species. Synthesis and *X*-ray crystal structure of $[\{Ni(bppte)(\mu\text{-}OH)\}_2][ClO_4]_2\cdot(CH_3)_2CO$, 1063–6
Reactions of the metallacycle $[(OC)(cp)\overline{FeC(SMe)SC(FeL_n)S}]^+$ with nucleophiles. *X*-Ray crystal structures of the complexes $[(OC)(cp)\overline{FeC(NC_5H_{10})SC(FeL_n)S}]SO_3CF_3$ and $[(OC)(cp)\overline{FeC\{(CN)(SMe)\}SC(FeL_n)S}]$ [FeL_n = Fe(cp)$(CO)_2$, cp = η-C_5H_5], 1067–74
Crystal and molecular structure of bis(2-amino-5-methyl-1,3,4-thiadiazole-N^3)dibromomercury(II). A spectroscopic study and INDO calculations, 1075–8
Chemistry of phosphido-bridged dimolybdenum complexes. Part 1. High-yield synthesis of $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}H)(\mu\text{-}PPh_2)(CO)_4]$

CRYSTAL STRUCTURE (contd)
and its reactions with organophosphorus ligands: *X*-ray crystal structure of $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}H)(\mu\text{-}PPh_2)(CO)_3\{P(OMe)_3\}]$, 1083–8
Studies of pendant arm macrocyclic ligands. Part 6. Synthesis of two penta-aza macrocyclic ligands containing single pendant co-ordinating 2-pyridylmethyl and 1-pyrazolylmethyl arms, and characterisation of their nickel(II), copper(II), cobalt(III), and zinc(II) complexes. Crystal structure of {3,11-dibenzyl-7-(2′-pyridylmethyl)-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}zinc(II) perchlorate, 1089–94
Reaction of manganese(II) arsine oxide complexes with sulphur dioxide: some unexpected products. The *X*-ray crystal structure of $[(Ph_3AsO)_2H]I_3$, 1095–8
Crystal and molecular structure of the anion $[Rh_7(CO)_{16}]^{3-}$ in its tetramethylammonium salt, 1103–6
Stepwise construction of $[Os_6(CO)_{18}(\mu_6\text{-}P)]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of $[Os_6(\mu\text{-}H)_2(CO)_{20}(MeCN)(\mu_3\text{-}PH)]$ and $[PPh_3Me]\text{-}[Os_6(CO)_{18}(\mu_6\text{-}P)]$ **(1988, 173)**, 1107
Synthesis and electrode reactions of difluorogermanium(IV) porphyrins. Molecular stereochemistry and crystal structure of difluoro(2,3,7,8,12,13,17,18-octaethylporphyrinato)germanium(IV), 1109–14
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 70. Tetranuclear metal compounds with rhenium–molybdenum or –tungsten bonds. Crystal structures of $[Mo_2Re_2(\mu_3\text{-}CC_6H_4Me\text{-}4)_2(\mu\text{-}CO)_2(CO)_7(\eta\text{-}C_5H_5)_2]\cdot 1.5CH_2Cl_2$ and $[W_2Re_2(\mu\text{-}H)(\mu_3\text{-}\sigma\text{:}\sigma\text{:}\eta^2\text{-}C{=}CH_2)(\mu_3\text{-}CMe)(\mu\text{-}CO)(CO)_8(\eta\text{-}C_5H_5)_2]$, 1121–30
The chemistry of dinitrogen residues. Part 5. [Tris(pyrazolyl)borato]-complexes of titanium(III); the crystal structures of trimethylhydrazinium trichloro[tris(3,5-dimethylpyrazolyl)borato]titanate(III) and dichloro(3,5-dimethylpyrazole)-[tris(3,5-dimethylpyrazolyl)borato]titanium(III), 1153–8
A potential iron pharmaceutical composition for the treatment of iron-deficiency anaemia. The crystal and molecular structure of *mer*-tris-(3-hydroxy-2-methyl-4*H*-pyran-4-onato)iron(III), 1159–64
Hydrido platinum metal macrocyclic complexes: the synthesis and single-crystal *X*-ray structure of *cis*-$[IrCl(H)L^1]PF_6$ {L^1 = 7-methyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 1165–8
Phosphorus–nitrogen compounds. Part 54. The reactions of geminal $N_3P_3(NH_2)_2Cl_4$ and of $N_3P_3(NH_2)Cl_5$ with alkoxide ions in alcohols. The geminal $\equiv P(NH_2)_2$ to non-geminal $\equiv P(NH_2)(OR)$ rearrangement. The crystal structures of *trans*-$N_3P_3(NH_2)_2(OPr^n)_4$, *cis*-$N_3P_3(NH_2)_2(OMe)_4$, and geminal $N_3P_3(NH_2)_2(OMe)_4$, 1169–78
Organo–platinum–iron complexes derived from allenes. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)CH_2C(=CH_2)\}Pt(PPh_3)]$, $[(OC)_3Fe(\mu\text{-}dppm)\{\mu\text{-}C(=CH_2)CH_2\}Pt(PPh_3)]$, and $[(OC)_2Fe(\mu\text{-}dppm)\{\eta^4\text{-}(CH_2)(CMe_2)CPt\text{-}(PPh_3)\}]$, 1185–92
Synthesis and characterisation of the tetranuclear phosphinidene clusters $[Os_3MH_2(CO)_{12}(PR)]$ (M = Os, R = Ph or cyclo-C_6H_{11} (M = Ru, R = cyclo-C_6H_{11}) and the crystal and molecular structure of $[Os_4(\mu\text{-}H)_2(CO)_{12}(\mu_3\text{-}PC_6H_{11})]$, 1199–204
Preparation, *X*-ray structural analysis, and method of interconversion of two isomeric forms of $[Os_6(CO)_{16}\{P(OMe)_3\}_2]$, 1205–12
Dithiolene-like nickel complexes of the methyl ester of dithiocarbazic acid and its N^3 phenyl- and benzyl-substituted derivatives. Crystal and molecular structure of $[Ni\{PhNC_6H_4NNC(S)SMe\}(NCS)]$, 1217–24
Polynuclear manganese(II) complexes with Robson-type ligands. Synthesis, characterization, molecular structure, and magnetic properties, 1225–36
Mixed-metal carbido carbonyl clusters. Part 3. Synthesis and structural characterization of $[Rh_6C(CO)_{15}\{Ag(NCMe)\}_2]\cdot 0.5MeOH$, $[Rh_6C(CO)_{15}\{M(PPh_3)\}_2]$ (M = Cu, Ag, or Au), and of the anion $[Rh_6C(CO)_{15}\{Au(PPh_3)\}]^-$ as its PPh_4^+ salt, 1237–48
Reorientation of the alkyne moiety in the heterometallic cluster $[FeCo_2(CO)_9(EtC_2Et)]$, induced by phosphine, phosphite, or isonitrile substitution for CO. Crystal structure of $[FeCo_2(CO)_8(PPh_3)(EtC_2Et)]$, 1249–58
X-Ray crystal structures of two isomers of the hydrido–carbonyl anion $[Re_7(\mu\text{-}H)C(CO)_{21}]^{2-}$. The problematic existence of triply bridging hydrides in clusters containing interstitial main-group elements, 1281–8
Reinvestigation of the synthesis of tris[benzoyl(thiobenzoyl)methanato-*S*]arsenic(III): synthesis and *X*-ray structure of 3,3′-thiodi(1,3-diphenylprop-2-en-1-one), 1289–92
Interaction of metal ions with 6-oxopurine nucleotides. Part 1. *X*-Ray structures of ternary cobalt(III) complexes with inosine 5′-monophosphate or guanosine 5′-monophosphate, 1297–302
Interaction of metal ions with 6-oxopurine nucleotides. Part 2.[1] *X*-Ray structures of ternary nickel(II) complexes with 2′-deoxyguanosine 5′-monophosphate or guanosine 5′-monophosphate, 1303–8
Tri-, tetra-, penta-, and hexa-nuclear phenylphosphinidene-capped products from the reaction of dodecacarbonyltri-ruthenium with phenylphosphine: crystal structures of $[Ru_4(\mu_4\text{-}PPh)_2(\mu\text{-}CO)(CO)_{10}]$, $[Ru_5(\mu_4\text{-}PPh)\{\mu\text{-}PPh(OPr^n)\}(\mu\text{-}H)(CO)_{13}]$, $[Ru_6(\mu_4\text{-}PPh)_2(\mu_3\text{-}PPh)_2(CO)_{12}]$, and $[Ru_6(\mu_4\text{-}PPh)_3(\mu_3\text{-}PPh)_2(CO)_{12}]$, 1315–30
Synthesis, spectroscopy, and crystal structure of a thiocyanato-bridged mixed-valence copper(I)–copper(II) compound with the ligand 1,6-bis(5′-methylimidazol-4′-yl)-2,5-dithiahexane, 1337–40
cis- and *trans*-Dichloro chelate complexes of niobium(IV): synthesis and structure of *trans*-dichloro[*NN*′-ethylenebis(acetylacetonylideneiminato)(2−)]niobium(IV) and *cis*-dichloro{7,16-dihydro-6,8,15,17-tetramethyldibenzo[*b*,*i*]-[1,4,8,11]tetra-azacyclotetradecinato(2−)}niobium(IV)–acetonitrile (1/2), 1361–6
Synthesis, magnetic properties, redox behaviour, and crystal structure of the bridged binuclear nickel(II) complex $[Ni_2(\mu\text{-}OH)(\mu\text{-}CH_3CO_2)_2L_2]ClO_4\cdot H_2O$, 1367–70
Synthesis and nuclear magnetic resonance spectroscopy of geometrical isomers of 1,3,5-trimethyl-2,4,6-tris(*p*-methylphenoxy)-2,4,6-trioxocyclotriphosphazane: *X*-ray crystal structure of the *trans* isomer, 1371–6
Co-ordination chemistry of higher oxidation states. Part 26. Spectroscopic studies of tellurate complexes of the trivalent Group 1B metals. *X*-Ray structure of $Na_5[Cu\{TeO_4(OH)_2\}_2]\cdot 16H_2O$, 1377–82
Ligand substitution of $[M(SnPh_3)(MeCN)_2(CO)_2(NO)]$ (M = Cr or W) and crystal structure of $[Cr(SnPh_3)(MeCN)\{P(OMe)_3\}(CO)_2(NO)]$, 1397–400
Synthesis and *X*-ray crystal structure of a weak molecular adduct of diphenylmercury(II) with 1,2-bis(diphenylphosphinothioyl)ethane, 1401–4
Crystal structure of 2,2,4,4-tetrachloro-6,6-bis(trimethylsilylamino)cyclotriphosphazene, $N_3P_3Cl_4(NHSiMe_3)_2$, 1405–8
A low-spin iron nitrosyl complex from the reaction of NO with (5*H*,14*H*-6,8,15,17-tetramethyldibenzo[*b*,*i*][1,4,8,11]tetra-azacyclotetradecinato)iron(II), and its crystal structure, 1409–12
Reaction of $[FeCo(CO)_7(\mu\text{-}CH{=}CRH)]$ (R = H or Ph) with dimethylphenylphosphine. Synthesis and structure of $[FeCo(CO)_4(\mu\text{-}CO)(PMe_2Ph)_2(\mu\text{-}CH{=}CH_2)]$, an electronically unbalanced iron–cobalt complex, 1417–20
Facile carbon–carbon bond formation on a triosmium cluster: crystal structures of $[Os_3(CO)_8\{C(Me)C(Me)C(O)C(Me)C(Me)C(Ph)C(Ph)\}]$ and $[Os_3(CO)_8\{P(OMe)_3\}\{C(Me)C(Me)C(O)C(Me)C(Me)\}]$, 1421–4
Copper(II) and zinc(II) co-ordination compounds of tridentate bis(benzimidazole)pyridine ligands. Crystal and molecular structures of bis[2,6-bis(1′-methylbenzimidazol-2′-yl)pyridine]copper(II) diperchlorate monohydrate and (acetonitrile)[2,6-bis(benzimidazol-2′-yl)pyridine](perchlorato)copper(II) perchlorate, 1429–36
The reactions of $[Ru_3(CO)_{12}]$ with nitrogen-containing heterocycles. Crystal structures of $[Ru_3(\mu\text{-}H)(\mu_3\text{-}ppy)(CO)_9]$ and $[Ru_3(\mu\text{-}napy)(\mu\text{-}CO)_3(CO)_7]$, 1437–44
Pentamethylcyclopentadienyl molybdenum and tungsten carbene complexes. *X*-Ray crystal structures of *cis*- and *trans*-$[MoI(CO)_2\{{=}C(CH_2)_3O\}(\eta\text{-}C_5Me_5)]$, 1449–56
Facilitation of the substitution reactions of triangular platinum cluster compounds and the structural characterisations of $[Pt_3(\mu\text{-}SO_2)_3\{P(C_6H_{11})_3\}_3]$ and $[NEt_4][Pt_3(\mu\text{-}Br)(\mu\text{-}SO_2)_2\{P(C_6H_{11})_3\}_3]$ by single-crystal *X*-ray techniques, 1461–6

CRYSTAL STRUCTURE (contd)

Oxidation and reduction chemistry of bis(η-arene)niobium compounds; the *X*-ray crystal structure of bis(η-toluene)(trimethylphosphine)niobium tetrafluoroborate, 1475–8

Synthesis and characterization of pentagonal-bipyramidal mercury(II) complexes with 2,6-diacetylpyridine bis(2′-pyridylhydrazone). *X*-Ray structure of [2,6-diacetylpyridine bis(2′-pyridylhydrazone)]mercury(II) tetrachloro-mercurate(II), 1479–86

Bis(acetato)bis[4-(*N*-acetylamino)pyridine]aquacopper(II)–hydrogen fluoride–hydrate (1/2/2): *X*-ray structure reveals $H_2O{\cdot}HF$ hydrogen bonded in the lattice, 1493–6

Synthesis and structural characterisation of some *triangulo*- and binuclear clusters of platinum from the reaction of $[Pt_3(\mu\text{-}SO_2)_3\{P(C_6H_{11})_3\}_3]$ with 2,6-xylyl isocyanide, 1509–16

Synthesis and hydroformylation reaction of dinuclear rhodium(I) complexes with mixed bridging ligands. *X*-Ray structure of $[Rh_2(\mu\text{-}pz)(\mu\text{-}SBu^t)(CO)_2\{P(OMe)_3\}_2]$, 1523–8

Synthesis, characterization, and crystal structures of tin(IV) 1-pyrrolethiocarboxylates, 1533–42

Preparation, molecular structure, and stereochemical properties of copper(II) complexes co-ordinated to (3*S*)- and (*RS*)-3-aminopiperidine: effect of ring size on stereochromism, 1543–8

Crystal structures of *o*-, *m*-, and *p*-nitrophenylferrocenes and their relevance to other sterically crowded phenylferrocenes, 1549–56

Synthesis and single-crystal *X*-ray structure determination of *trans*-$[RhCl_2(tmc)]PF_6$ (tmc = 1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecane), 1561–4

Oxidative addition of halogens to $[Pt(S_2N_2H)(PR_3)_2]BF_4$. *X*-Ray crystal structures of $[Pt(S_2N_2H)X(PMe_2Ph)]$ (X = Br or I) and the monoclinic and triclinic polymorphs of $[Pt(S_2N_2H)Br_2(PMe_2Ph)_2]BF_4$, 1569–76

Synthesis and reactivity of mixed-ligand isocyanide–diphosphine iron(0) complexes. *X*-Ray crystal structure of *cis*-$[\overset{\frown}{Fe}(dppe)(CNPh)_2\{\overset{\frown}{N}(Ph)=C(Me)\text{–}\overset{\frown}{C}=NPh\}]ClO_4$, 1591–8

Structurally diversified neutral copper(I) isocyanide complexes: mono- and bi-nuclear complexes from the reaction of copper(I) halides with *p*-tolyl isocyanide, 1599–606

A reactive and versatile fourteen-electron copper(I) fragment for binding carbon monoxide, isocyanides, and phosphines: synthesis, crystal structure, and reactivity of (2-methylquinolin-8-olato)copper(I) derivatives, 1607–16

Hydrido-organometallic complexes of platinum(II). *X*-Ray crystal structure of *trans*-$[PtH(C_6H_4F\text{-}p)(PPh_3)_2]$, 1617–22

The oxidative isomerisation of *cis*,*cis*-dicarbonylmanganese(I) derivatives; isolation of the resulting *trans*-dicarbonylmanganese(II) complexes and the *X*-ray structure of *cis*,*cis*-$[MnBr(CO)_2\{P(OPh)_3\}(Ph_2PCH_2PPh_2)]$, 1623–30

Allylation of cobalt-co-ordinated cyclo-octatetraene by the $[Fe\{P(OMe)_3\}(NO)_2(\eta^3\text{-allyl})]^+$ cation: ring closure to 1,2,3,3a-tetrahydropentalenyl derivatives and the *X*-ray structure of $[Co(\eta^5\text{-}C_8H_8R)(\eta\text{-}C_5Me_5)][PF_6]$[R = $CH_2C(Me)=CH_2$], 1631–6

Lewis base adducts of Group 11 metal(I) compounds. Part 36. The synthesis and *X*-ray crystallographic characterisation of polymeric copper(I) iodide–benzonitrile (2/1), 1637–40

Synthesis and structural characterisation of some cyclopentadienyliron–bismuth complexes, 1671–8

Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of $[(\eta^5\text{-}C_5H_5)(OC)_2Mo\{\mu\text{-}Ag(PPh_3)\}(\mu\text{-}PPh_2)Mn(CO)_4]$ and $[(\eta\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}I)(\mu\text{-}PPh_2)Mn(CO)_4]$, 1683–8

Crystal structure of $NH_4[Ni\{S_2C_2(CN)_2\}_2]\cdot H_2O$, the first equidistant stack d^7 monoanion metal dithiolene complex, 1689–92

N-Thionitrosamine complexes: substitution reactions of complexes $[MCl(C_6H_4Me\text{-}p)(CO)(PPh_3)_2(SNNMe_2)]$ (M = Ru or Os) and the crystal structure of $[OsCl(C_6H_4Me\text{-}p)(CO)(PPh_3)_2(SNNMe_2)]$, 1693–6

Preparation, *X*-ray crystal structure, and properties of $[V(S_2)_2(terpy)]$: intramolecular coupling of the sulphide ligands of $[VS_4]^{3-}$, 1705–8

Co-ordinative abilities of ligands which favour S,S chelation: copper(I) halide complexes of *N*,*N*′-diphenyldithiomalonamide. The crystal and molecular structure of bis(*N*,*N*′-diphenyldithiomalonamide)copper(I) iodide–methanol (2/1), 1713–8

Crystal and molecular structure of 1,2:3,4-di-μ-*o*-aminobenzoato-*OO*′-1,3-bis(*o*-aminobenzoato-*O*)-1,2,4;2,3,4-di-μ_3-oxo-tetrakis[di-n-butyltin(IV)], 1719–24

Preparation and crystal structures of $[AsPh_4]_4[Tc_4N_4O_2(ox)_6]$ and $[AsPh_4]_2[TcO(ox)_2(Hox)]\cdot 3H_2O$: technetium complexes containing quadridentate or unidentate oxalato ligands, 1725–32

Interaction of acetonitrilebis(cyclopentadienyl)molybdenum(II) or tris(acetonitrile)tricarbonylmolybdenum(0) in acetonitrile with tetrafluoroboric acid. *X*-ray crystal structures of $[Mo^{IV}(\eta^5\text{-}C_5H_5)_2(MeCN)(CH{=}CHMe)][BF_4]_2$, $[Mo^{IV}(\eta^5\text{-}C_5H_5)_2(PMe_3)_2][BF_4]_2$, $[Mo^0(CO)_2(MeCN)_3(\eta^3\text{-}CH_2CHNH_2)]_2BF_3$, and $[Mo^{III}_2(\mu\text{-}O)(MeCN)_{10}][BF_4]_4$, 1737–42

Technetium(v)–nitrido complexes of dithiocarbazic acid derivatives. Reactivity of $[Tc{\equiv}N]^{2+}$ core towards Schiff bases derived from *S*-methyl dithiocarbazate. Crystal structures of [*S*-methyl 3-(2-hydroxyphenylmethylene)dithiocarbazato]nitrido(triphenylphosphine)technetium(v) and bis(*S*-methyl 3-isopropylidenedithiocarbazato)nitridotechnetium(v), 1743–50

Synthesis and structural characterisation of a novel high-nuclearity gold–tin cluster compound, $[Au_8(PPh_3)_7(SnCl_3)]_2[SnCl_6]$, 1751–6

Boron-11 and proton nuclear magnetic resonance study of *anti*-$B_{18}H_{22}$ and its anions, *anti*-$[B_{18}H_{21}]^-$ and *anti*-$[B_{18}H_{20}]^{2-}$. The crystal and molecular structure of $[NMe_4]_2[anti\text{-}B_{18}H_{20}]$, 1785–94

The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds $[Au_3Ru_4(\mu_3\text{-}H)(\mu\text{-}H)\{\mu\text{-}Ph_2E(CH_2)_nE'Ph_2\}(CO)_{12}]$ (*n* = 1 or 2, E = E′ = As or E = As, E′ = P; *n* = 2, E = E′ = P). *X*-Ray crystal structure of $[Au_3Ru_4(\mu_3\text{-}H)(\mu\text{-}H)(\mu\text{-}Ph_2AsCH_2PPh_2)(CO)_{12}]$, 1795–802

Functionalized isocyanides as ligands. Part 5. Syntheses and reactions of 3-(benzylphosphonio)indolin-2-ylidene complexes of platinum(II). *X*-Ray crystal structure of *trans*-$[Pt\{o\text{-}\overset{\frown}{C}N(H)C_6H_4\overset{\frown}{C}[P(CH_2Ph)_2Ph]\}X(PPh_3)_2]BF_4\cdot 2C_2H_4Cl_2$ (X = Cl or Br), 1803–12

Binuclear nickel(II) and copper(II) complexes containing an endogenous alkanethiolato-bridging sulphur atom and exogenous μ-pyrazolate (pz) group. Crystal structure of $[Ni_2L(pz)]$ [L = *NN*′-3-mercaptopentane-1,5-diylbis(salicylideneiminate)(3−)], 1823–6

Reactivity of *o*-diphenylphosphinobenzaldehyde toward $[Pt(C_2H_4)(PPh_3)_2]$. *X*-Ray structure of $[Pt(OCC_6H_4PPh_2\text{-}o)H(PPh_3)]\cdot C_6H_6$, 1833–6

cis-Bis(2,2′-bipyridine)bis(pyridine)ruthenium(II) salts: a spectroscopic and structural study, 1837–42

Reactions of co-ordinated ligands. Part 43. Alkyne linking reactions at dimetal centres. Synthesis and structures of $[Mo_2\{\mu\text{-}(\sigma,\eta^3\text{:}\eta^2\text{:}\eta^3,\sigma\text{-}C_8H_4Bu^t_4)\}(\eta\text{-}C_5H_5)_2]$, $[Mo_2\{\mu\text{-}(\sigma,\eta^3\text{:}\eta^3,\sigma\text{-}CH{=}CHBu^tC_6H_2Bu^t_3)\}(\eta\text{-}C_5H_5)_2]$, and $[FeMo(CO)_2(C_4Me_2Ph_2)(\eta\text{-}C_5H_5)_2]$, 1843–52

The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 1. Reactivity of mixed carbonyl(formamido)(phosphine)rhenium(I) complexes with RNCS (R = Ph or *p*-MeC_6H_4) and PhNCO. Crystal structure of the thiazetidine rhenium(I) complex $[Re(CO)_2(PPh_3)_2\{PhN{=}C(OEt)\text{–}S\}]$, 1853–6

The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 2. Reactivity of $[ReO(OR)Cl_2(PPh_3)_2]$ (R = Me or Et) with RNCS (R = Ph or *p*-MeC_6H_4). Crystal structure of the thiazetidine rhenium(v) complex $[ReOCl_2(PPh_3)\{p\text{-}MeC_6H_4N{=}C(OEt)\text{–}S\}]$, 1857–60

Homoleptic hexathia complexes of rhodium. The synthesis, electrochemistry, and single-crystal *X*-ray structure of $[RhL_2][PF_6]_3$ (L = 1,4,7-trithiacyclononane), 1861–6

Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$, 1867–78

Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 74. Salts of the anions $[W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]^-$ (R = C_6H_4Me-2 or $C_6H_3Me_2$-2,6) as reagents for the synthesis of compounds with heteronuclear metal–metal

CRYSTAL STRUCTURE (contd)
bonds: crystal structure of $[NEt_4][FeW(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta^5\text{-}C_2B_9H_9Me_2)]$, 1879–90
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 75. Reactions of octacarbonyldicobalt with the salts $[X][W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$ (X = NEt_4 or PPh_4; R = Me, Ph, C_6H_4Me-2, or C_6H_4Me-4); crystal structure of $[PPh_4][Co_2W(\mu_3\text{-}CPh)(CO)_8(\eta^5\text{-}C_2B_9H_9Me_2)]\cdot 0.5CH_2Cl_2$, 1891–8
Synthesis and structural study of (2,2′-bipyridine)perchlorato(styrene)copper(I), 1907–10
Crystal growth, structure, and properties of $KLa(CrO_4)_2$, 1911–4
A novel 'tent-like' structure of a copper(I) aggregate. The crystal and molecular structure of nona[*N*-diethoxythiophosphoryl)-*N*′-phenylisothioureato]decacopper(I) perchlorate, 1915–20
Synthesis and characterization of diazido–germanium(IV) and -tin(IV) porphyrins. Crystal structure of diazido(5,10,15,20-tetra-*p*-tolylporphyrinato)germanium(IV), 1921–6
Tetrazolate rhodium(I) complexes. Crystal structures of the trinuclear complexes $[Rh_3(\mu_3\text{-}ttz)(\mu\text{-}Cl)Cl(cod)_2(CO)_2]$ (ttz = tetrazolate, cod = cyclo-octa-1,5-diene) and $[Rh_3(\mu_3\text{-}ttz)(\mu\text{-}Cl)Cl(CO)_6]$, an unusual example of metal–metal interactions, 1927–34
Synthesis and *X*-ray crystal structures of an imidazolate-bridged polynuclear copper(II) complex exhibiting a unique helicoid structure and its precursor mononuclear complex, 1943–8
Reactions of acetylenes with noble metal carbonyl halides. Part 11. Synthesis of $[Pt\{\overline{CMe{=}C(H)COOMe}\}(CO)Cl]$ *via* polynuclear platinum carbonyls. *X*-Ray crystal structure determination of the σ-alkenyl platinum complex $[N(PPh_3)_2][Pt\{CMe{=}C(H)CO_2Me\}(CO)Cl_2]$, 1949–56
Synthesis of new heteronuclear complexes with bridging carbyne ligands between tungsten and gold. *X*-Ray crystal structure of $[AuW(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_2(bipy)(C_6F_5)Br]$, 1957–62
Preparation, structure, and nuclear magnetic resonance properties of the nine-vertex *nido*-rhenaborane $[(PMe_2Ph)_3H_2ReB_8H_{11}]$ and some related chemistry, 1969–82
Studies on transition-metal oxo and nitrido complexes. Part 9. Periodato and tellurato oxo-ruthenium complexes as organic oxidants. *X*-Ray crystal structure of *trans*-$NaK_5[RuO_2(HIO_6)_2]\cdot 8H_2O$, 1983–8
Copper(II)-assisted hydrolysis of 2,4,6-tris(2-pyridyl)-1,3,5-triazine. Part 1. Crystal structures of [bis(2-pyridylcarbonyl)amido](2-pyridylformamide)copper(II) perchlorate monohydrate and [bis(2-pyridylcarbonyl)amido]copper(II) perchlorate, 2033–40
Pentamethylcyclopentadienylrhodaborane chemistry. Part 4. The isolation, molecular structure, and nuclear magnetic resonance study of an interesting phosphino-bridged *arachno*-type nine-vertex rhodaborane $[2,5\text{-}(\mu\text{-}PPh_2)\text{-}1\text{-}(PHPh_2)\text{-}2\text{-}(\eta^5\text{-}C_5Me_5)\text{-}2\text{-}RhB_8H_9]$, 2059–64
Preparation and characterisation of mixed bismuth and ruthenium clusters; *X*-ray crystal structures of $[Ru_3(\mu\text{-}H)_3(CO)_9(\mu_3\text{-}Bi)]$, $[Ru_3(CO)_9(\mu_3\text{-}Bi)_2]$, and $[Ru_4(CO)_{12}(\mu_4\text{-}Bi)_2]$, 2091–8
Iron–rhodium and iron–iridium complexes containing one bridging $Ph_2PCH_2PPh_2$ (dppm) ligand: crystal structure determination of $[(\eta^5\text{-}C_5H_5)Fe(\mu\text{-}CO)_2(\mu\text{-}dppm)RhMe_{0.4}Cl_{1.6}]$, 2099–102
Derivatives of $[Rh_6(CO)_{13}C]^{2-}$: solution structure of $[Rh_6H(CO)_{13}C]^-$ from nuclear magnetic resonance measurements and the *X*-ray crystal structure of $[Rh_6(CO)_{11}C(\mu\text{-}Ph_2PCH_2CH_2PPh_2)]^{2-}$, 2103–8
Two compounds containing dinuclear three-co-ordinated halogenoargentate(I) anions: crystal structures of bis(tetraphenylphosphonium) di-μ-chloro-dichlorodiargentate(I) and bis(tetraphenylphosphonium) di-μ-bromo-dibromodiargentate(I), 2117–20
Transition metal complexes of substituted 2,2′-biquinolines. Part 1. The crystal and molecular structures of [8,8′-bis(aminomethyl)-2,2′-biquinoline]dichloromanganese(II) and [8,8′-bis(aminomethyl)-2,2′-biquinoline]chlorocopper(II) chloride, 2121–6
Synthesis and reactivity of mononuclear molybdenum phosphido complexes, $[Mo(CO)_2\{P(Cl)R\}(\eta\text{-}C_5H_5)][R = CH(SiMe_3)_2$ or $\overline{NCMe_2CH_2CH_2CH_2CMe_2}]$. *X*-Ray crystal structures of $[Mo(CO)_2\{P(X)(\overline{NCMe_2CH_2CH_2CH_2CMe_2})\}(\eta\text{-}C_5H_5)]$ (X = Cl or NMe_2) and $[Mo_2(CO)_4\{\mu\text{-}P_2[CH(SiMe_3)_2]_2\}(\eta\text{-}C_5H_5)_2]$, 2127–34
Comparisons of thirteen- to sixteen-membered tetra-azacycloalkane copper(II) complexes derived from template syntheses involving nitroethane and formaldehyde. Crystal structures of (10-methyl-10-nitro-1,4,8,12-tetra-azacyclopentadecane)copper(II) and (3-methyl-3-nitro-1,5,9,13-tetra-azacyclohexadecane)copper(II) perchlorates, 2145–52
Electrochemical studies of nickel(II) and cobalt(II) complexes of tetra-azamacrocycles bearing a pyridine functional group and *X*-ray structures of $[Ni^{II}(L^3)Cl]ClO_4$ and $[Ni^{II}(L^3)][ClO_4]_2\cdot H_2O$ {L^3 = *meso*-2,3,7,11,12-pentamethyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 2153–60
Synthesis and reactivity of dienyl–metal compounds. Part 30. Alkylation of thiolato bridges: a route to stable dialkyl sulphide bridged dinuclear molybdenum complexes. Crystal structure determination of $[(\eta\text{-}C_5H_5)(CO)Mo(\mu\text{-}SMe_2)_2Mo(PMe_3)(\eta\text{-}C_5H_5)][BF_4]_2$, 2171–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. ^{109}Ag-{^1H} INEPT nuclear magnetic resonance studies on $[Ag_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 1, 2, or 4) and *X*-ray crystal structure of $[Ag_2Ru_4(\mu_3\text{-}H)_2(\mu\text{-}Ph_2PCH_2PPh_2)(CO)_{12}]$, 2177–86
Indium(III) halide complexes with trimethylphosphine sulphide and trimethylarsine sulphide: structures and bonding of $[InX_3(Me_3MS)_2]$ (X = Cl or Br, M = P or As) and $[InCl_3(H_2O)(Me_3AsS)_2]$, 2187–92
Di- and tri-nuclear complexes of palladium(II) containing doubly- and triply-bridging pyridine-2-thionato (pyS) ligands: crystal structure of $[Pd_3(C_6H_4CH_2NMe_2)_3(pyS)_2][BF_4]$, 2193–200
X-Ray crystal structure of (2,2′-bipyrimidine)[1,2-dicyanoethylene-1,2-dithiolato(2−)]platinum(II)–*N*,*N*-dimethylformamide and properties of PtS_2N_2-type complexes, 2215–20
Crystal structure of 2,4-bis(phenylthio)-1,3-dithia-2λ^5,4λ^5-diphosphetane 2,4-disulphide, 2225–6
Co-condensation of molybdenum atoms with the bulky tertiary diphosphine 1,2-bis(di-isopropylphosphino)ethane: the molecular structure of $[MoH_4(Pr^i_2PCH_2CH_2PPr^i_2)_2]$, 2227–30
Structure, vibrational and electronic spectra, and bonding in *trans*-diaquabis(oxalato)vanadate(III) complex salts, $A[V(C_2O_4)_2(H_2O)_2]\cdot xH_2O$ (A = Cs, K, or NH_3Me), and the *X*-ray crystal structure of the potassium salt (x = 3), 2245–54
The co-ordination of small molecules by manganese(II) phosphine complexes. Part 14. Some novel mixed tertiary phosphine–t-butyl isocyanide complexes of manganese(II): $[MnBr_2(CNBu^t)(PPhMe_2)]$ and $[Mn(CNBu^t)_4(PR_3)_2]^{2+}$ (PR_3 = $PPhMe_2$, PPh_2Me, $PPhEt_2$, or PPr^n_3), and the *X*-ray crystal structure of bis(dimethylphenylphosphine)tetrakis(t-butyl isocyanide)manganese(II) bis[tribromo(dimethylphenylphosphine oxide)manganate(II)], $[Mn(CNBu^t)_4(PPhMe_2)_2][MnBr_3(OPPhMe_2)]_2$, 2261–6
Synthesis and oxidation reactions of mono- and di-nuclear rhodium carbonyl complexes of (*o*-diphenylphosphino-phenyl)amine, H_2L; *X*-ray structure analysis of a rhodium(II) amido-bridged dimer, $[\{Rh(\mu\text{-}HL)(CO)Cl\}_2]\cdot EtOH$, 2287–92
The triphenylphosphine adduct of a copper(I) complex involving an incompletely bound N_2S_2 macrocyclic ligand, 2301–6
Synthesis and chemical characterization of the hexanuclear anions $[Ir_6(CO)_{14}X]^-$ (X = Cl, Br, I, or SCN). Crystal and molecular structures of $[PPh_4][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}Br)]$ and $[N(PPh_3)_2][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}X)]$ (X = I or SCN), 2307–14
Mono- and bi-nuclear four-membered methanide auracycles; synthesis and reactivity. *X*-Ray structure of *cis*-$[Au(C_6F_5)_2(SPPh_2O)(CH_2PPh_2Me)]$, 2323–8
Five-co-ordinate magnesium complexes: synthesis and structure of quadridentate Schiff-base derivatives, 2341–6
Silver(I)–phenoxyalkanoates. The crystal and molecular structures of polymeric [(4-chloro-2-methylphenoxy)ethano-ato-*O*,*O*′]silver(I), [(2,4-dichlorophenoxy)ethanoato-*O*,*O*′]silver(I), and di-μ-[(2-chlorophenoxy)ethanoato-*O*,*O*′]disilver(I)–silver(I) perchlorate (1/1), 2353–6
Metal–phenoxyalkanoic acid interactions. Part 28. Crystal and molecular structures of the sodium, ammonium, and magnesium complexes of (*o*-phenylenedioxy)diacetic acid, 2357–62
2-Pyridyl- and quinolin-2-yl-functionalised organyltellurium ligands. The stabilisation of diorganyl tritellurides. The crystal and molecular structures of 2-(2-pyridyl)phenyltellurium(IV) tribromide, dimethyldithiocarbamato[2-(2-pyridyl)phenyl]tellurium(II), and *p*-ethoxyphenyl 2-(2-pyridyl)phenyl telluride, 2363–72

CRYSTAL STRUCTURE (contd)

Dinitrogen complexes of osmium(II) with thiolate co-ligands: *X*-ray structure of *mer*-$[OsCl(SC_6F_5)(N_2)(PMe_2Ph)_3]$, 2393–6

Axially asymmetric metal alkyls. Part 6. Lithiation of 2,2′-dimethyl-1,1′-binaphthyl and its trimethylsilylated compounds, and of 2,2′,6,6′-tetramethyl-1,1′-biphenyl (asymmetric induction): *X*-ray crystal structures of monomeric $[\{Li(Me_2NCH_2CH_2NMe_2)\}_2\{2\text{-}CH_2C_{10}H_6\}_2]$ and $[Li\{(Me_2NCH_2CH_2)_2NMe\}\{2\text{-}CH_2\text{-}6\text{-}Me(C_6H_3)_2\text{-}2',6'\text{-}Me_2\}]$, 2403–10

Aquanonadecatungstodiphosphate(14−) polyanion, $[P_2W_{19}O_{69}(OH_2)]^{14-}$: *X*-ray crystallographic structure of its potassium salt, chemical relationships in the tungstophosphate system, and conversion into the diaquaicosatungsto-diphosphate $[P_2W_{20}O_{70}(OH_2)_2]^{10-}$, 2411–20

Reactivity of cyclopalladated compounds. Part 18. Compared reactivity of the Pd–C bonds of two closely related six-membered palladocyclic rings with substituted alkynes. *X*-Ray and molecular structures of $[Pd\{C(Ph)=C(R)C(Ph)=C(R)(o\text{-}C_6H_4N=CMeNHPh)\}Cl]$ (R = CO_2Et) and $[Pd\{C(R)[C(CO_2Me)C(R)=C(R)C(R)=C(R)][o\text{-}C_6H_4N=CMe(OH)]\}Cl]$ (R = CO_2Me), 2421–30

Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron–molybdenum compounds with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2C(Me)C(Me)\}(CO)_4(\eta\text{-}C_5H_5)]$, $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2\}(CO)_5(\eta\text{-}C_5H_5)]$, and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CH_2PMe_3)CHMe\}(CO)_5(\eta\text{-}C_5H_5)]$, 2431–42

Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 78. Reactions of $[MoFe(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_6(\eta\text{-}C_5H_5)]$ with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(O)C(Et)C(Et)\}(\mu\text{-}CO)\text{-}(CO)_4(\eta\text{-}C_5H_5)]$ and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C[C(O)Me]\}(CO)_5(\eta\text{-}C_5H_5)]$, 2443–52

Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 79. Synthesis and reactions of the alkylidynemetal complexes $[M(\equiv CR)(CO)_2(\eta\text{-}C_5H_5)]$ (R = $C_6H_3Me_2$-2,6, M = Cr, Mo, or W; R = C_6H_4Me-2, C_6H_4OMe-2, or $C_6H_4NMe_2$-4, M = Mo); crystal structure of the compound $[MoFe(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta\text{-}C_5H_5)]$, 2453–66

Dinuclear complexes of rhodium and iridium with cyanide or thiocyanate bridges: molecular structure of $[(PMe_2Ph)_3Cl_2Ir(\mu\text{-}CN)IrCl_2(PMe_2Ph)_3][ClO_4]$, 2475–82

Co-ordination chemistry of higher oxidation states. Part 27. Synthesis, properties, and electrochemistry of some *cis*-tetrahalogenoiridium(IV) complexes: crystal structure of $[Ir(phen)Cl_4]$, 2483–90

Synthesis and crystal structure of $[Ru(\eta^5\text{-}C_5H_4CH_2CH_2PPh_2)(PPh_3)Cl]$, a compound having a cyclopentadienyl proton with a chemical shift of δ 1.91 p.p.m., 2491–4

Crystal and molecular structure, and spectroscopic characterization of tetrakis(2-amino-1,3,4-thiadiazolium) hexadecabromotetra-antimonate(III), 2501–4

The first complexes of cyanogen halides with silver(I): crystal structure of $[Ag(NCCl)_2][SbF_6]$, 2507–8

Organohydrazido(2−) complexes of molybdenum and tungsten from α,ω-dibromides; crystal and molecular structures of (azetidinylimido)bis[1,2-bis(di-*p*-tolylphosphino)ethane]bromotungsten bromide–dichloromethane (1/3), 2525–34

Synthesis and *X*-ray crystal structure of acetonitriletetrakis(2,4,6-triisopropylthiophenolato)molybdenum(IV), 2535–8

The protonation of molybdenum and tungsten bis(diphosphine)bis(dinitrogen) complexes: the crystal and molecular structure of bis[1,2-bis(diethylphosphino)ethane]bromo[hydrazido(2−)]tungsten bromide–methanol (2/1), 2545–54

Metallaheteroborane chemistry. Part 3. Synthesis of $[2,2\text{-}(PR_3)_2\text{-}1,2\text{-}TePtB_{10}H_{10}]$ (R_3 = Et_3, Bu^n_3, or Me_2Ph), their characterisation by nuclear magnetic resonance spectroscopy, and the crystal and molecular structure of $[2,2\text{-}(PEt_3)_2\text{-}1,2\text{-}TePtB_{10}H_{10}]$, 2555–64

Structure and dynamic behaviour of palladium(II) complexes formed from *trans*-N_2S_2 macrocyclic ligands and the crystal structure of $[PdL^1][PF_6]_2$ (L^1 = 7,8,17,18-tetrahydro-6*H*,16*H*-dibenzo[*g*,*o*][1,9,5,13]-dithiadiazacyclohexadecine), 2573–8

Tertiary phosphine complexes of iron porphyrins: synthesis, molecular stereochemistry, and crystal structure of bis(dimethylphenylphosphine)(*meso*-5,10,15,20-tetraphenylporphyrinato)iron(II), 2615–20

An *X*-ray crystallographic investigation of the structures of pyrazine adducts of diphenyltin dichloride and dimethyltin dichloride, 2621–8

Transition-metal carbonyl derivatives of the germanes. Part 17. Tetracarbonylgermyl(trimethylgermyl)iron, $[Fe(CO)_4(GeH_3)(GeMe_3)]$, its conversion into $[\{Fe(CO)_4(GeH_2)\}_2]$, and hence to $[Co_4Fe_2Ge_2(CO)_{21}]$ (characterised by *X*-ray crystallography) *via* $[Co_4Fe_2Ge_2(CO)_{22}]$, 2629–34

Rhenium complexes of tetra-aza macrocycles: the synthesis and single-crystal *X*-ray structure of *trans*-$[Re(O)_2(cyclam)]Cl\cdot 2(BPh_3\cdot H_2O)$, 2645–8

Molecular helicity in inorganic complexes; double helical binuclear complexes of 2,2′:6′,2″:6″,2‴:6‴,2⁗-quinquepyridine (L): crystal structures of $[Cu_2L_2(O_2CMe)][PF_6]_3\cdot H_2O$ and $[Cu_2L_2][PF_6]_3\cdot 2MeCN$, 2655–62

Addition of halogens to $[\{Au(CH_2)_2PPh_2\}_2RX]$ complexes. The structures of *cis,trans*-$[\{Au(CH_2)_2PPh_2\}_2(CH_2CF_3)Br_2]$ and *trans,trans*-$[\{Au(CH_2)_2PPh_2\}_2(CHCl_2)Br_2Cl]$, 2669–74

Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$ **(1988, 1867)**, 2683

Preparation of carbonyl, halogeno, and alkyl niobocene complexes and their reactions with oxygen. Crystal structures of $[Nb(\eta\text{-}C_5H_4SiMe_3)_2Cl_2]$, $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(O)Me]$ and $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(C_6F_5)(CO)]$, 2685–94

Synthesis and structures of phosphinidene and phosphido complexes of iron and cobalt, 2713–22

Synthesis and spectroscopic properties of the 'mixed' seven-co-ordinate complexes $[MI_2(CO)_3L(L')]$ [M = Mo or W; L,L′ = PPh_3, $PPh_2(C_6H_{11})$, $PPh(C_6H_{11})_2$, $AsPh_3$, or $SbPh_3$] and rearrangement of selected $[MI_2(CO)_3L(L')]$ to $[HL][MI_3(CO)_3L']$. *X*-Ray crystal structure of $[PPh_2(C_6H_{11})H][WI_3(CO)_3(SbPh_3)]\cdot Et_2O$, 2729–34

Metallaheteroborane chemistry. Part 4. The synthesis of *closo*-$[2,2\text{-}(PPh_3)_2\text{-}2\text{-}H\text{-}1,2\text{-}XMB_{10}H_{10}]$ (X = Se or Te, M = Rh or Ir) compounds, their characterisation by nuclear magnetic resonance techniques, and the crystal and molecular structure of the X = Te, M = Rh complex, 2739–46

Crystal structure and magnetic properties of the complex $[Cu(en)_2]_2[\{Fe(edta)\}_2O]\cdot 2H_2O$. A heterobimetallic Cu^{II}– Fe^{III} system containing a μ-oxo-di-iron(III) moiety, 2747–52

Protonation *versus* oxidation in the reactions of trifluoroacetic acid with dinuclear osmium(I) complexes: molecular structure of $[Os_2(MeCO_2)_2(\mu\text{-}H)(CO)_4(PMe_2Ph)_2][PF_6]$, 2753–8

Organic chemistry of dinitrogen and related ligands. Part 7. *N*-Vinylation or oxidative replacement of the hydrazido(2−) ligand in reactions of $[WX(dppe)_2(NNH_2)]Y$ (dppe = $Ph_2PCH_2CH_2PPh_2$, X = F or Br, Y = BF_4 or Br) with cyanoalkenes. *X*-Ray crystal structure of $[WBr(dppe)_2\{NC(Br)C(CN)C(CN)_2\}]$, 2781–6

The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_nEPh_2\}(CO)_{12}]$ (M = Cu or Ag; E = As or P; *n* = 1 or 2). *X*-Ray crystal structure of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_2PPh_2\}(CO)_{12}]$, 2787–96

Studies on olefin-co-ordinating transition metal carbene complexes. Part 12. Novel synthesis and structural characterization of (η^6-arene)dicarbonyliron complexes, and their oxidation products, 2803–8

Pentamethylcyclopentadienylrhodaborane chemistry. Part 5. Preparation, molecular structure, and nuclear magnetic resonance spectra of the *arachno* ten-vertex rhodadecaboranes $[6\text{-}(\eta^5\text{-}C_5Me_5)\text{-}6,9\text{-}(RNC)_2\text{-}arachno\text{-}6\text{-}RhB_9H_{11}]$ (R = Me or *p*-MeC_6H_4), 2809–16

Complexes of ligands providing endogenous bridges. Part 6. The *X*-ray crystal structure and magnetic properties of a hexanuclear copper(II) aggregate bearing μ_3-$Cu_3(OH)$ cores supported by 4-nitro-2,6-bis[(salicylideneamino)methyl]-phenolate ligands, 2817–24

CRYSTAL STRUCTURE (contd)
Synthesis and characterization of the novel copper(I) anion $[Cu(PPh_3)Br_2]^-$, 2825–30
Crystal and molecular structures of four bis(diphosphine) complexes of iron(II): bis[1,2-bis(diethylphosphino)ethane]diiodoiron(II), dichlorobis[*o*-phenylenebis(diphenylphosphine)]iron(II), bis(acetonitrile)bis[*o*-phenylenebis(diphenyl-phosphine)]iron(II) di-iodide, and iodobis[*o*-phenylenebis(diphenylphosphine)]iron(II) iodide, 2871–8
Co-ordination chemistry of ruthenium with chelating amine ligands: synthesis and *X*-ray structural study of the N_6-co-ordinated ruthenium(II) complex of 1,4,8,11-tetrakis(2-pyridylmethyl)-1,4,8,11-tetra-azacyclotetradecane, 2879–84
High-valent ruthenium oxo complexes of *NNN'N'*-tetramethyl-3,6-dimethyl-3,6-diazaoctane-1,8-diamine (L^1). *X*-Ray crystal structure determination of *cis*-$[Ru^{III}(L^1)Cl_2]ClO_4$, 2885–8
Structural comparison of cluster compounds containing an edge-bridging $M(PPh_3)$ (M = Cu, Ag, or Au) fragment. *X*-Ray crystal structure of $[AgRu_3(CO)_9(C_2Bu^t)(PPh_3)]$, 2889–92
Reconsideration of the crystal structure refinement of the complex $[PPh_4][W(\equiv CC_6H_4Me\text{-}4)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$, 2903–4
X-Ray crystal and molecular structure of phenyl(triphenylphosphine)mercury(II) nitrate, 2913–4
Crystal structure and spectroscopic properties of mercury(II) halide complexes. Part 4. Crystal and molecular structure and circular dichroism spectra of the chiral 1:1 adduct $(S)_6(S)_6(-)_{589}$-methyl 2-phenylbutyl thioether-mercury(II) chloride, 2915–20
Synthesis and reactivity of *N,N*-dialkylcarbamato complexes of manganese(II). Crystal and molecular structure of $[Mn_6(O_2CNEt_2)_{12}]$, a hexamer with four five-co-ordinated manganese(II) atoms, 2921–6
Synthetic and structural studies on organomolybdenum and organotungsten complexes containing bismuth. *X*-Ray crystal structures of $[BiCl\{Mo(CO)_3(\eta\text{-}C_5H_5)\}_2]$ and $[BiCl\{Mo(CO)_2(CNBu^t)(\eta\text{-}C_5H_5)\}_2]$, 2941–52
Synthesis and co-ordination chemistry of two penta-azamacrocycles containing a 1,4-piperazine backbone. Crystal structure determinations of 6,12-dioxo-1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-triene and 1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-trienenickel(II) perchlorate, 2959–64
Electrophilic behaviour of nitrosyls: the reactions of ketones with nitrosyls and the crystal and molecular structure of the product of the reaction between *trans*-chloro(nitrosyl)tetra(pyridine)ruthenium and acetone, 2965–70
Synthesis of cyclometallated naphthylpalladium complexes *via* transmetallation reactions of naphthylmercury with palladium species. Crystal structure determination of $[\{Pd(mxn)(O_2CMe)\}]$, 2975–82
Synthesis, *X*-ray structure, and reactivity with Lewis acids of metallacyclopentane derivatives of rhodium(III) and iridium(III). Observation of the first boron trifluoride-promoted C–H bond activation in transition metal alkyls, 2983–94
Dicopper(II) complexes of a binucleating N_4 macrocycle containing mono- and di-atomic bridges; magnetic interactions mediated by alkoxo- and diaza-bridging ligands. Crystal structures of $[Cu_2(L^1)(pz)_2][ClO_4]_2$, $[Cu_2(L^1)(OEt)_2(NCS)_2]$, and $[Cu_2(L^1)(OMe)_2(MeCN)_2][BPh_4]_2$, 2995–3004
Synthesis of heterobimetallic complexes containing cobalt–platinum or rhodium–platinum dative bonds. Molecular structure of $[(\eta^5\text{-}C_5H_5)(CO)_2Rh{\rightarrow}Pt(C_6F_5)_2(CO)]$, 3005–10
Nucleophilic (Michael) additions to $(Ph_2P)_2C{=}CH_2$ when chelated to dimethylplatinum(II), di(*o*-tolyl)platinum(II), or iodo(trimethyl)platinum(IV). Crystal structure of $[PtMe_3I\{(PPh_2)CH(PPh_2)CH_2NHCH_2Ph\}]$, 3011–6
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 81. Reactions of the compound $[Fe_2(\mu\text{-}CH_2)(CO)_8]$ with alkylidyne–molybdenum and –tungsten complexes. Reactivity of the product $[WFe\{\mu\text{-}\sigma{:}\eta\text{-}CH{=}CH(C_6H_4Me\text{-}4)\}(CO)_6(\eta\text{-}C_5H_5)]$, and crystal structures of the species $[W_2Fe(\mu_3\text{-}CC_6H_4Me\text{-}4)\{\mu\text{-}\sigma{:}\eta\text{-}C(C_6H_4Me\text{-}4){=}CH_2\}(CO)_6(\eta\text{-}C_5H_5)_2]$ and $[WFe\{\mu\text{-}C(Et)C(Et)C(H)CH(C_6H_4Me\text{-}4)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$, 3017–30
Crystal structures and magnetic properties of the mono-μ-halogeno-bridged copper(II) chains Cu(pcpci)X [pcpci = *N*-(2′-pyridylcarbonyl)pyridine-2-carboximidate, X = Cl or Br], 3041–6
Heterobimetallic clusters derived from $[MS_4]^{2-}$ (M = Mo or W): synthesis and structural characterization of $[NMe_4]_4[(CuCl)_5Cl_2WS_4]$, a double cubane-like complex, 3055–8
X-Ray crystal structure of tetra-acetatobis(tetrathiafulvalene)dirhodium(II) and the properties of its iodine-doped complex, 3059–62
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron–molybdenum compounds with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2C(Me)C(Me)\}(CO)_4(\eta\text{-}C_5H_5)]$, $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2\}(CO)_5(\eta\text{-}C_5H_5)]$, and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CH_2PMe_3)CHMe\}(CO)_5(\eta\text{-}C_5H_5)]$ **(1988, 2431)**, 3063

CYANATE
The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 1. Reactivity of mixed carbonyl(formamido)(phosphine)rhenium(I) complexes with RNCS (R = Ph or *p*-MeC_6H_4) and PhNCO. Crystal structure of the thiazetidine rhenium(I) complex $[Re(CO)_2(PPh_3)_2\{PhN{=}C(OEt)\text{-}S\}]$, 1853–6

CYANIDE
Electron spin resonance studies of the solution photochemistry of octacyanotungstate(v) ions at 77 and 293 K, 285–92
Structure and stability of cyano-derivatives of organochlorophosphate(v) ions, 2077–82
Sulfur–nitrogen bonded metal chelates. Part 17. Reactions of alcohols with the co-ordinated nitrile in nickel(II) complexes $[NiL(NCR)][ClO_4]$ (L = a *S,N,N*-tridentate anion; R = Me, Et, or Ph) under different conditions, 2373–8
Dinuclear complexes of rhodium and iridium with cyanide or thiocyanate bridges: molecular structure of $[(PMe_2Ph)_3Cl_2Ir(\mu\text{-}CN)IrCl_2(PMe_2Ph)_3][ClO_4]$, 2475–82
Stepwise ligand dissociation and multiple changes in oxidation state in the fast atom bombardment mass spectra of cyanometallate complexes of transition metals, 2905–12

CYANOGEN HALIDE
The first complexes of cyanogen halides with silver(I): crystal structure of $[Ag(NCCl)_2][SbF_6]$, 2507–8

CYCLOBUTANEDICARBOXYLATE
Kinetics of the displacement of cyclobutane-1,1-dicarboxylate from diammine(cyclobutane-1,1-dicarboxylato)-platinum(II) in aqueous solution, 2135–40

CYCLOBUTENEDIONATE
A novel co-ordination mode for the squarate ligand [dihydroxycyclobutenedionate(2−)]: synthesis, crystal structure, and magnetic properties of *catena*-diaqua(2,2′-bipyridyl)-μ-(squarato-O^1,O^2)-nickel(II) dihydrate, 587–90

CYCLODEXTRIN
Preparation and properties of inclusion compounds of ferrocene and its derivatives with cyclodextrins, 729–32

CYCLODIPHOSPHAZANE
Phosphorus–nitrogen compounds. Part 56. The solution synthesis of some *trans*-1,3-dialkyl-2,4-diphenyl-2,4-dithiocyclodi-λ^5-phosphazanes and their proton, carbon-13, and phosphorus-31 nuclear magnetic resonance spectra, 2591–6

CYCLOHEPTADIENYL
Kinetics of nucleophilic attack on co-ordinated organic moieties. Part 25. A nucleophilic order for attack upon the $[Fe(CO)_3(1\text{—}5\text{-}\eta\text{-}C_7H_9)]^+$ cation, 2009–14

CYCLOHEPTATRIENYL
η^3- and η^7-Cycloheptatrienyltungsten chemistry: synthesis of $[W(\eta^5\text{-}C_7H_9)(\eta^3\text{-}C_7H_7)(PMe_3)_2]$ and $[W(\eta\text{-}C_7H_7)(\eta^3\text{-}C_7H_{11})(PMe_3)]$, 2851–4

CYCLOPENTADIENYL
Side-on bonded nitrosobenzene bridging two metal atoms, in a binuclear cyclopentadienyl cobalt complex: crystal structure of $[\{Co(cp)\}_2(\mu\text{-}PhNO)_2]$, 545–8
The synthesis, using hexamethyldialuminium, and reactivity of new (1—5-η-cyclopentadienyl)methyl(nitrosyl)-molybdenum complexes. Crystal structure of bromo(η^5-cyclopentadienyl)methyl(nitrosyl)(triphenylphosphine)-molybdenum, 819–26
Synthesis, characterization, and electrochemistry of dicyclopentadienylsiloxane-bridged dicarbonyldi-iron, 833–8
Analysis of substituted ferrocenes by infrared spectroscopy, 1383–92
The photochemistry of cyclopentadienyl platinum carbonyl dimers:

CYCLOPENTADIENYL (contd)
characterization of $[Pt_2(\mu\text{-}CO)(\eta^5\text{-}C_5R_5)_2]$ (R = H or Me) using matrix isolation and fast time-resolved infrared spectroscopy, 1501–8
Preparation and characterization of alkane– and arene–chalcogenolate complexes of η^5-cyclopentadienyltitanium(IV): first synthesis of $[Ti(\eta^5\text{-}C_5H_5)(SeCH_3)_3]$, 1529–32
Crystal structures of *o*-, *m*-, and *p*-nitrophenylferrocenes and their relevance to other sterically crowded phenylferrocenes, 1549–56
Synthesis and structural characterisation of some cyclopentadienyliron–bismuth complexes, 1671–8
Synthesis and crystal structure of $[Ru(\eta^5\text{-}C_5H_4CH_2CH_2PPh_2)(PPh_3)Cl]$, a compound having a cyclopentadienyl proton with a chemical shift of δ 1.91 p.p.m., 2491–4
The oxidation of alkyne-bridged dimolybdenum complexes, 2509–12
Preparation of carbonyl, halogeno, and alkyl niobocene complexes and their reactions with oxygen. Crystal structures of $[Nb(\eta\text{-}C_5H_4SiMe_3)_2Cl_2]$, $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(O)Me]$ and $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(C_6F_5)(CO)]$, 2685–94
Synthesis of heterobimetallic complexes containing cobalt–platinum or rhodium–platinum dative bonds. Molecular structure of $[(\eta^5\text{-}C_5H_5)(CO)_2Rh\rightarrow Pt(C_6F_5)_2(CO)]$, 3005–10

CYCLOPENTENEDITHIOCARBOXYLATE
Sulfur–nitrogen bonded metal chelates. Part 17. Reactions of alcohols with the co-ordinated nitrile in nickel(II) complexes $[NiL(NCR)][ClO_4]$ (L = a *S,N,N*-tridentate anion; R = Me, Et, or Ph) under different conditions, 2373–8

CYCLOPOLYARSANE
Ionization energies and thermal fragmentation patterns of gaseous cyclopoly-arsanes and -phosphanes E_nR_n (E = As or P; R = Me, Bu^t, or CF_3; *n* = 3—5): a joint temperature-variable field ionization mass spectrometric and ultraviolet photoelectron spectroscopic study, 195–200

CYCLOPOLYPHOSPHANE
Ionization energies and thermal fragmentation patterns of gaseous cyclopoly-arsanes and -phosphanes E_nR_n (E = As or P; R = Me, Bu^t, or CF_3; *n* = 3—5): a joint temperature-variable field ionization mass spectrometric and ultraviolet photoelectron spectroscopic study, 195–200

CYCLOTHIAPHOSPHAZENE
Reaction of the lithium enolate of acetaldehyde, $Li(OCH{=}CH_2)$, with cyclothiaphosphazenes, 1099–102

CYCLOTRIPHOSPHAZANE
Synthesis and nuclear magnetic resonance spectroscopy of geometrical isomers of 1,3,5-trimethyl-2,4,6-tris(*p*-methylphenoxy)-2,4,6-trioxocyclotriphosphazane: *X*-ray crystal structure of the *trans* isomer, 1371–6

CYCLOTRIPHOSPHAZENE
Phosphorus–nitrogen compounds. Part 54. The reactions of geminal $N_3P_3(NH_2)_2Cl_4$ and of $N_3P_3(NH_2)Cl_5$ with alkoxide ions in alcohols. The geminal $\equiv P(NH_2)_2$ to non-geminal $\equiv P(NH_2)(OR)$ rearrangement. The crystal structures of *trans*-$N_3P_3(NH_2)_2(OPr^n)_4$, *cis*-$N_3P_3(NH_2)_2(OMe)_4$, and geminal $N_3P_3(NH_2)_2(OMe)_4$, 1169–78
Crystal structure of 2,2,4,4-tetrachloro-6,6-bis(trimethylsilylamino)cyclotriphosphazene, $N_3P_3Cl_4(NHSiMe_3)_2$, 1405–8
Phosphorus–nitrogen compounds. Part 55. The reactions of 2,2,4,4-tetrachloro-6,6-diphenylcyclotriphosphazatriene with aliphatic difunctional alcohols, amines, and aminoalcohols. Proton and phosphorus-31 nuclear magnetic resonance spectroscopic studies of the products, 1757–64

CYMENE
The synthesis of di- and tetra-nuclear *p*-cymene–osmium hydride complexes; characterisation by $^1H(^{187}Os)$ reverse INEPT two-dimensional nuclear magnetic resonance spectroscopy, 629–34

CYSTEINE
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution, 943–6
Anaerobic oxidation of cysteine to cystine by iron(III). Part 2. The reaction in basic solution, 2109–12
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution **(1988, 943)**, 2243

DECARBOXYLATION
Cerium(IV)-induced decarboxylation of penta-ammine oxaloacetatocobalt(III) perchlorate, 1413–6

DECOMPOSITION
The chemistry in air of the rare-earth-metal sesquioxides. Comparative study of hexagonal and cubic neodymia samples, 1765–72
Kinetics of the decomposition of coprohaem Compound I in aqueous solution, 2273–8

DEHYDROGENATION
Dicopper(I) complexes containing intramolecular 1,2-diaza bridging ligands. Behaviour of the dicopper site in the dehydrogenation of hydrazobenzene. Crystal structure of $[Cu_2L^2(pydz)_2][ClO_4]_2$, 347–52

DEUTERIATION
Homogeneous deuteriation of alkenes using $[RhX(PR_3)_3]$ (X = halide, R = aryl) catalysts, 1653–6

DIAMINE
Synthesis and spectral characterization of cobalt(III) complexes of *N*-(*o*-carboxyphenyl)iminodiacetic acid, 159–62

DIASTEREOISOMER
Synthesis of the arene complex $[\{RuCl_2(\eta^6\text{-}o\text{-}MeC_6H_4CO_2Me)\}_2]$ and separation of its diastereomeric (−)(*S*)-1-phenylethylamine adducts, 315–20
Structure and dynamic behaviour of palladium(II) complexes formed from *trans*-N_2S_2 macrocyclic ligands and the crystal structure of $[PdL^1][PF_6]_2$ (L^1 = 7,8,17,18-tetrahydro-6*H*,16*H*-dibenzo[*g*,*o*][1,9,5,13]-dithiadiazacyclohexadecine), 2573–8

DIAZA-OCTANEDIAMINE
High-valent ruthenium oxo complexes of *NNN'N'*-tetramethyl-3,6-dimethyl-3,6-diazaoctane-1,8-diamine (L^1). *X*-Ray crystal structure determination of *cis*-$[Ru^{III}(L^1)Cl_2]ClO_4$, 2885–8

DIAZENE
Organic chemistry of dinitrogen and related ligands. Part 7. *N*-Vinylation or oxidative replacement of the hydrazido(2−) ligand in reactions of $[WX(dppe)_2(NNH_2)]Y$ (dppe = $Ph_2PCH_2CH_2PPh_2$, X = F or Br, Y = BF_4 or Br) with cyanoalkenes. *X*-Ray crystal structure of $[WBr(dppe)_2\{NC(Br)C(CN)C(CN)_2\}]$, 2781–6

DIAZENIDE
Bimetallic complexes of platinum, rhodium, or copper bridged by $Ph_2PCH_2PPh_2$ or $Ph_2PC(=CH_2)PPh_2$ to diazenidorhenium groups; crystal structure of $[(4\text{-}MeC_6H_4N_2)ClRe(\mu\text{-}dppm)_2(\mu\text{-}CO)PtCl]\cdot 2Me_2CO$, 769–74
The nitrogen-15 nuclear magnetic resonance criterion of bond angle in diazenido-complexes, 2935–40

DIAZOMETHANE
A study of the generality of the reaction of diazomethane with halogenoplatinum(II) complexes in the preparation of (halogenomethyl)platinum(II) complexes, 1773–80

DIBENZODITHIADIAZACYCLOHEXADECINE
Structure and dynamic behaviour of palladium(II) complexes formed from *trans*-N_2S_2 macrocyclic ligands and the crystal structure of $[PdL^1][PF_6]_2$ (L^1 = 7,8,17,18-tetrahydro-6*H*,16*H*-dibenzo[*g*,*o*][1,9,5,13]-dithiadiazacyclohexadecine), 2573–8

DIEZOALKANE
Diazoalkane complexes of molybdenum and tungsten *via* hydrazido(2−)-complexes, 553–6

DIKETONE
Reactions of 1,2-dicarbonyls with metallic copper under argon and dioxygen. Oxidative C–C bond scission by metallic copper, 2663–8
Reactions of 1,2-dicarbonyls with metallic copper under argon and dioxygen. Oxidative C–C bond scission by metallic copper **(1988, 2663)**, 3063

DIMETHYL SULPHOXIDE
Spectrophotometric and conductometric study of cobalt(II) bromide–dimethyl sulphoxide solutions, 369–72
Equilibrium measurements for silver(I) complexes with polyamines in dimethyl sulphoxide, 1781–4

DINITROGEN
Mechanistic studies on iron phosphine complexes. Part 2. Protonation and substitution reactions of dinitrogen complexes, 515–20
Diazoalkane complexes of molybdenum and tungsten *via* hydrazido(2−)-complexes, 553–6
Dinitrogen complexes of osmium(II) with thiolate co-ligands: *X*-ray structure of *mer*-$[OsCl(SC_6F_5)(N_2)(PMe_2Ph)_3]$, 2393–6
Organohydrazido(2−) complexes of molybdenum and tungsten from α,ω-dibromides; crystal and molecular structures of (azetidinylimido)bis[1,2-bis(di-*p*-tolylphosphino)ethane]bromotungsten bromide–dichloromethane (1/3), 2525–34

DINITROGEN (contd)
The protonation of molybdenum and tungsten bis(diphosphine)bis(dinitrogen) complexes: the crystal and molecular structure of bis[1,2-bis(diethylphosphino)ethane]bromo[hydrazido(2−)]tungsten bromide–methanol (2/1), 2545–54
DINITROGEN OXIDE
Formation of carbonato and hydroxo complexes of vanadium(IV) on reaction of carbonylbis(η-pentamethylcyclopentadienyl)vanadium(II) with dinitrogen oxide, 2505–6
DIOL
The direct electrochemical synthesis of tin(II) derivatives of aromatic 1,2-diols, and a study of their oxidative addition reactions, 2539–44
DIOXYGEN
Calorimetric study on oxygen addition to cobalt(II) complexes with tris(2-aminoethyl)amine and 3,7-diazanonane-1,9-diamine, 373–80
Reaction between 1,3-diphenylisobenzofuran and a blue oxyhaemocyanin model compound, 2003–4
The co-ordination of small molecules by manganese(II) phosphine complexes. Part 11. The co-ordination of dioxygen by manganese(II) complexes containing long-chain phosphine ligands, 2065–70
Preparation of carbonyl, halogeno, and alkyl niobocene complexes and their reactions with oxygen. Crystal structures of $[Nb(\eta\text{-}C_5H_4SiMe_3)_2Cl_2]$, $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(O)Me]$ and $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(C_2F_5)(CO)]$, 2685–94
DIPHENYLPHOSPHINOPHENYLAMINE
Synthesis and oxidation reactions of mono- and di-nuclear rhodium carbonyl complexes of (*o*-diphenylphosphino-phenyl)amine, H_2L; *X*-ray structure analysis of a rhodium(II) amido-bridged dimer, $[\{Rh(\mu\text{-}HL)(CO)Cl\}_2]\cdot EtOH$, 2287–92
DIPHOSPHANE
Phosphorus-31 and carbon-13 nuclear magnetic resonance studies of unsymmetrical tetra-alkyldiphosphanes $R^1R^2PPMe_2$ and $R^1R^2PPEt_2$, 2775–80
DIPHOSPHINE
^{197}Au Mössbauer spectra of complexes of bis(diphenylphosphino)amine containing gold(I), gold(II), and gold(III), 23–6
Conjugate addition of acetylides to complexes of type $[M(CO)_4\{(Ph_2P)_2C{=}CH_2\}]$ (M = Cr, Mo, or W): crystal structure of $[M(CO)_4\{(Ph_2P)_2C{=}CHCH{=}CHPh\}]$ formed by the base-catalysed isomerization of $[M(CO)_4\{(Ph_2P)_2CHCH_2C{\equiv}CPh\}]$, 89–92
Acid-catalysed additions of acetylenes to $[XPd(\mu\text{-}Ph_2PCH_2PPh_2)_2PdX]$ (X = Cl, Br, or I) to give dimetallated olefin complexes of type $[XPd(\mu\text{-}Ph_2PCH_2PPh_2)_2(\mu\text{-}HC{=}CR)PdX]$ (R = H, Ph, or C_6H_4Me-*p*), 457–60
Mechanistic studies on iron phosphine complexes. Part 1. Protonation and substitution of *trans*-$[FeH(X)(diphosphine)_2]$ (X = Cl or Br, diphosphine = $Et_2PCH_2CH_2PEt_2$ or $Ph_2PCH_2CH_2PPh_2$), 509–14
Mechanistic studies on iron phosphine complexes. Part 2. Protonation and substitution reactions of dinitrogen complexes, 515–20
Reactivity of ethylenebis(dithiocarbamate) and diethyldithiocarbamate ligands towards phosphine complexes of nickel(II), 537–40
Diazoalkane complexes of molybdenum and tungsten *via* hydrazido(2−)-complexes, 553–6
Mechanism of the reaction of $[Mo(\eta\text{-}C_6H_6)(Me_2PCH_2CH_2PMe_2)(\eta\text{-}C_2H_4)H]^+$ with PMe_3 giving $[Mo(\eta\text{-}C_6H_5Et)(dmpe)(PMe_3)H]^+$: metal-to-ring migration of an ethyl group, 557–78
Synthesis, single-crystal *X*-ray structures, and fluxional behaviour of 1,2-$[Os_3(CO)_{10}(\mu\text{-dppe})]$ and its protonated derivative 1,2-$[Os_3(\mu\text{-}H)(CO)_{10}(\mu\text{-dppe})][PF_6]$ where dppe = $Ph_2PCH_2CH_2PPh_2$, 579–86
Preparation and reactions of $[Fe(Ph_2PCH_2PPh_2\text{-}P)(CO)(COMe)(\eta^5\text{-}C_5H_5)]$ and its derivatives, 725–8
Organo–platinum–iron complexes containing one bridging $Ph_2PCH_2PPh_2$ ligand. Crystal structures of $[(OC)_3Fe(\mu\text{-dppm})(\mu\text{-}CO)Pt(PPh_3)]$, $[(OC)_2Fe(\mu\text{-dppm})\{\mu\text{-}C(O)C_2H_2\}Pt(PPh_3)]$, and $[(OC)_3Fe(\mu\text{-dppm})(\mu\text{-}CMe{=}CH_2)\text{-}Pt(PPh_3)][BF_4]$, 741–50
The heteronuclear cluster chemistry of the Group 1B metals. Part 5. *X*-Ray crystal structure and dynamic behaviour of the heptanuclear mixed-metal cluster $[Au_3Ru_4(\mu\text{-}H)(CO)_{12}(\mu\text{-}Ph_2PCH_2PPh_2)(PPh_3)]$, 751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 6. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (M = Cu or Ag, *n* = 1—6). *X*-Ray crystal structures of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (*n* = 2, 3, or 5), 757–68
Bimetallic complexes of platinum, rhodium, or copper bridged by $Ph_2PCH_2PPh_2$ or $Ph_2PC(=CH_2)PPh_2$ to diazenidorhenium groups; crystal structure of $[(4\text{-}MeC_6H_4N_2)ClRe(\mu\text{-dppm})_2(\mu\text{-}CO)PtCl]\cdot 2Me_2CO$, 769–74
Hydrido-clusters derived by protonation, hydrogenation, or photolytic decarbonylation of the chelating diphosphine compounds 1,1-$[Os_3(CO)_{10}(diphosphine)]$ where diphosphine is $Ph_2PCH_2CH_2PPh_2$ or $Ph_2PCH_2CH_2CH_2PPh_2$, and crystal structure of $[OsH_2\{Ph_2P(CH_2)_3PC_6H_4\}(CO)_8]\cdot 0.5CH_2Cl_2$, 827–32
Experimental and theoretical studies of the reactions of electrophiles with cationic formyl complexes; formation of methoxy- and hydroxy-carbene complexes of ruthenium(II) and osmium(II), 1079–82
Syntheses of vinylidene-bridged A-frame palladium complexes containing $Ph_2PCH_2PPh_2$ or $Ph_2PCHMePPh_2$: protonation to give carbyne-bridged complexes, 1179–84
Organo–platinum–iron complexes derived from allenes. Crystal structures of $[(OC)_3Fe(\mu\text{-dppm})\{\mu\text{-}C(O)CH_2C(=CH_2)\}Pt(PPh_3)]$, $[(OC)_3Fe(\mu\text{-dppm})\{\mu\text{-}C(=CH_2)CH_2\}Pt(PPh_3)]$, and $[(OC)_2Fe(\mu\text{-dppm})\{\eta^4\text{-}(CH_2)(CMe_2)CPt\text{-}(PPh_3)\}]$, 1185–92
Synthesis and *X*-ray crystal structure of a weak molecular adduct of diphenylmercury(II) with 1,2-bis(diphenylphosphino-thioyl)ethane, 1401–4
Electroanalytical and spectrophotometric investigations on the metal(II)-1,2-bis(diphenylphosphino)ethane–acetylacetonate system (M = Ni, Pd, or Cu) in acetonitrile, 1425–8
Synthesis and reactivity of mixed-ligand isocyanide–diphosphine iron(0) complexes. *X*-Ray crystal structure of *cis*-$[Fe(dppe)(CNPh)_2\{\overline{N(Ph)=C(Me)-C}=NPh\}]ClO_4$, 1591–8
The oxidative isomerisation of *cis,cis*-dicarbonylmanganese(I) derivatives; isolation of the resulting *trans*-dicarbonylmanganese(II) complexes and the *X*-ray structure of *cis,cis*-$[MnBr(CO)_2\{P(OPh)_3\}(Ph_2PCH_2PPh_2)]$, 1623–30
Preparation and nuclear magnetic resonance spectroscopy of $[Ag_2\{\mu\text{-}CH_2(PPh_2)_2\}_3][O_3SCF_3]_2$, a disilver(I) complex with three bridging $CH_2(PPh_2)_2$ ligands, 1709–12
Iron–rhodium and iron–iridium complexes containing one bridging $Ph_2PCH_2PPh_2$ (dppm) ligand: crystal structure determination of $[(\eta^5\text{-}C_5H_5)Fe(\mu\text{-}CO)_2(\mu\text{-dppm})RhMe_{0.4}Cl_{1.6}]$, 2099–102
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. ^{109}Ag-{^{1}H} INEPT nuclear magnetic resonance studies on $[Ag_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (*n* = 1, 2, or 4) and *X*-ray crystal structure of $[Ag_2Ru_4(\mu_3\text{-}H)_2(\mu\text{-}Ph_2PCH_2PPh_2)(CO)_{12}]$, 2177–86
Co-condensation of molybdenum atoms with the bulky tertiary diphosphine 1,2-bis(di-isopropylphosphino)ethane: the molecular structure of $[MoH_4(Pr^i_2PCH_2CH_2PPr^i_2)_2]$, 2227–30
Ring expansion in dimetallacycle chemistry: preparation of a dimetallacyclopentanol from a dimetallacyclobutane, 2235–8
Insertion of carbon dioxide into a molybdenum–hydrogen bond. Photochemical formation of hydridoformato complex of molybdenum(II), 2241–2
Organohydrazido(2−) complexes of molybdenum and tungsten from α,ω-dibromides; crystal and molecular structures of (azetidinylimido)bis[1,2-bis(di-*p*-tolylphosphino)ethane]bromotungsten bromide–dichloromethane (1/3), 2525–34
The protonation of molybdenum and tungsten bis(diphosphine)bis(dinitrogen) complexes: the crystal and molecular structure of bis[1,2-bis(diethylphosphino)ethane]bromo[hydrazido(2−)]tungsten bromide–methanol (2/1), 2545–54
Organic chemistry of dinitrogen and related ligands. Part 7. *N*-Vinylation or oxidative replacement of the hydrazido(2−) ligand in reactions of $[WX(dppe)_2(NNH_2)]Y$

DIPHOSPHINE (contd)
(dppe = $Ph_2PCH_2CH_2PPh_2$, X = F or Br, Y = BF_4 or Br) with cyanoalkenes. *X*-Ray crystal structure of $[WBr(dppe)_2\{NC(Br)C(CN)C(CN)_2\}]$, 2781–6
Mössbauer and preparative studies of some iron(II) complexes of diphosphines, 2865–70
Crystal and molecular structures of four bis(diphosphine) complexes of iron(II): bis[1,2-bis(diethylphosphino)ethane]diiodoiron(II), dichlorobis[*o*-phenylenebis(diphenylphosphine)]iron(II), bis(acetonitrile)bis[*o*-phenylenebis(diphenylphosphine)]iron(II) di-iodide, and iodobis[*o*-phenylenebis(diphenylphosphine)]iron(II) iodide, 2871–8
Nucleophilic (Michael) additions to $(Ph_2P)_2C{=}CH_2$ when chelated to dimethylplatinum(II), di(*o*-tolyl)platinum(II), or iodo(trimethyl)platinum(IV). Crystal structure of $[PtMe_3I\{(PPh_2)CH(PPh_2)CH_2NHCH_2Ph\}]$, 3011–6
DISELENIDE
Reactions of some main group metals with diphenyl disulphide and diphenyl diselenide, 1045–8
DISULPHIDE
Reactions of some main group metals with diphenyl disulphide and diphenyl diselenide, 1045–8
Preparation, *X*-ray crystal structure, and properties of $[V(S_2)_2(terpy)]$: intramolecular coupling of the sulphide ligands of $[VS_4]^{3-}$, 1705–8
DITHIADIPHOSPHETANE
Crystal structure of 2,4-bis(phenylthio)-1,3-dithia-2λ⁵,4λ⁵-diphosphetane 2,4-disulphide, 2225–6
DITHIAHEXANE
Synthesis, spectroscopy, and crystal structure of a thiocyanato-bridged mixed-valence copper(I)–copper(II) compound with the ligand 1,6-bis(5′-methylimidazol-4′-yl)-2,5-dithiahexane, 1337–40
DITHIOCARBAMATE
Reactivity of ethylenebis(dithiocarbamate) and diethyldithiocarbamate ligands towards phosphine complexes of nickel(II), 537–40
Reactivity of rhenium(I) pseudo-allyl complexes with heterocumulenes. Part 2. Insertion reactions. Crystal structures of the thiazolyl-thioureido and -dithiocarbamato complexes $[Re(CO)_2(PPh_3)_2\{SC(NPh)NMe(C_3H_2NS)\}]\cdot CH_2Cl_2$ and $[Re(CO)_2(PPh_3)_2\{S_2CNMe(C_3H_2NS)\}]\cdot CH_2Cl_2$ (C_3H_2NS = thiazol-2-yl), 899–904
Dithiocarbamates of tungsten(III) and tungsten(IV) **(1987, 2531)**, 1107
Synthesis and dynamic nuclear magnetic resonance studies of co-ordinatively unsaturated alkyne complexes of tungsten(II), 2071–6
DITHIOCARBAZATE
Dithiolene-like nickel complexes of the methyl ester of dithiocarbazic acid and its N^3 phenyl- and benzyl-substituted derivatives. Crystal and molecular structure of $[Ni\{PhNC_6H_4NNC(S)SMe\}(NCS)]$, 1217–24
Technetium(V)–nitrido complexes of dithiocarbazic acid derivatives. Reactivity of $[Tc{\equiv}N]^{2+}$ core towards Schiff bases derived from *S*-methyl dithiocarbazate. Crystal structures of [*S*-methyl 3-(2-hydroxyphenylmethylene)dithiocarbazato]nitrido(triphenylphosphine)technetium(V) and bis(*S*-methyl 3-isopropylidenedithiocarbazato)nitridotechnetium(V), 1743–50
DITHIOCARBONATE
Iron–xanthate complexes $[Fe(CO)_2(\eta\text{-}C_5R_5)\{SC(S)OEt\}]$ and $[Fe(CO)(\eta\text{-}C_5R_5)(S_2COEt)]$ (R = H or Me). Synthesis and electrochemistry, 149–54
DITHIOLATE
X-Ray crystal structure of bis(*N*-ethylpyridinium) bis[4,5-dimercapto-1,3-dithiole-2-thionato(2−)]cuprate(II) and electrical properties of its oxidized salts, 967–72
DITHIOLE
X-Ray crystal structure of bis(*N*-ethylpyridinium) bis[4,5-dimercapto-1,3-dithiole-2-thionato(2−)]cuprate(II) and electrical properties of its oxidized salts, 967–72
DITHIOMALONAMIDE
Co-ordinative abilities of ligands which favour S,S chelation: copper(I) halide complexes of *N*,*N*′-diphenyldithiomalonamide. The crystal and molecular structure of bis(*N*,*N*′-diphenyldithiomalonamide)copper(I) iodide–methanol (2/1), 1713–8
DITHIOPHOSPHATE
Synthesis and dynamic nuclear magnetic resonance studies of co-ordinatively unsaturated alkyne complexes of tungsten(II), 2071–6
ELECTROCHEMISTRY
Iron–xanthate complexes $[Fe(CO)_2(\eta\text{-}C_5R_5)\{SC(S)OEt\}]$ and $[Fe(CO)(\eta\text{-}C_5R_5)(S_2COEt)]$ (R = H or Me). Synthesis and electrochemistry, 149–54
Electrochemical and spectroscopic studies on tetranuclear $[\{Re(\mu_3\text{-}X)(CO)_3\}_4]$ (X = Cl, Br, or I) and acetonitrile complexes derived therefrom, 245–8
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 7. Compounds containing strongly interacting redox centres derived from *para*-substituted anilines and phenols, 293–300
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 8. Complexes exhibiting weak or intermediate interaction between two redox centres, 301–8
Octabutoxyphthalocyanine, a new electron donor, 549–52
Reactivity of cationic molybdenum(II) complexes. Part 2. Electrochemical reduction of the eighteen-electron complexes $[Mo(CO)_3(\eta^5\text{-}C_5Me_5)L]^+$ [L = CO, *p*-MeC_6H_4NC, or $P(OMe)_3$]. Crystal structure of $[Mo_2(CO)_6(\eta^5\text{-}C_5Me_5)_2]$, 635–40
Manganese(IV) and manganese(V) complexes with *N*-(2-hydroxyphenyl)salicylamides, 641–6
Synthesis, spectroscopic, magnetic and electrochemical properties of diruthenium-(II,III) and -(III,III) complexes containing the mixed-carboxylato ligand systems $CH_3CO_2^-$–$CF_3CO_2^-$ and $C_6H_5CO_2^-$–$CF_3CO_2^-$, 661–8
Reductive nitrosylation of tetraoxometallates. Part 14. Generation and proton induced disproportionation of the $Re(NO)^{3+}$ moiety. Synthesis, characterisation, and electrochemistry of novel hydroxo- and halogeno-nitrosyl complexes of rhenium, 793–802
Synthesis, characterization, and electrochemistry of dicyclopentadienylsiloxane-bridged dicarbonyldi-iron, 833–8
Dinuclear metal complexes. Part 8. Effect of remote substituents on the redox potentials of mono- and di-nuclear copper(II) complexes, 935–42
The electrochemical synthesis of neutral copper(II) complexes of Schiff base ligands: the crystal structure of bis{*N*-[2′-2″-pyridyl]ethyl]-4,6-dimethoxysalicylideneiminato}copper(II), 1059–62
Dithiocarbamates of tungsten(III) and tungsten(IV) **(1987, 2531)**, 1107
Synthesis and electrode reactions of difluorogermanium(IV) porphyrins. Molecular stereochemistry and crystal structure of difluoro(2,3,7,8,12,13,17,18-octaethylporphyrinato)germanium(IV), 1109–14
Studies on metal complexes of *ortho*-quinone mono-oximes. Part 6. Redox behaviour of bis(4-chloro-1,2-benzoquinone 2-oximato)-copper(II) and -nickel(II); synthesis and characterization of reduced species containing a paramagnetic ligand, 1497–500
The oxidative isomerisation of *cis*,*cis*-dicarbonylmanganese(I) derivatives; isolation of the resulting *trans*-dicarbonylmanganese(II) complexes and the *X*-ray structure of *cis*,*cis*-$[MnBr(CO)_2\{P(OPh)_3\}(Ph_2PCH_2PPh_2)]$, 1623–30
Homoleptic hexathia complexes of rhodium. The synthesis, electrochemistry, and single-crystal *X*-ray structure of $[RhL_2][PF_6]_3$ (L = 1,4,7-trithiacyclononane), 1861–6
Electrochemical studies of nickel(II) and cobalt(II) complexes of tetra-azamacrocycles bearing a pyridine functional group and *X*-ray structures of $[Ni^{II}(L^3)Cl]ClO_4$ and $[Ni^{II}(L^3)][ClO_4]_2\cdot H_2O$ {L^3 = *meso*-2,3,7,11,12-pentamethyl-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 2153–60
A new approach to measurement of the donor strength and co-ordination chemistry of various solvents by oxidation of metal amalgam electrodes in dichloromethane, 2379–84
Co-ordination chemistry of higher oxidation states. Part 27. Synthesis, properties, and electrochemistry of some *cis*-tetrahalogenoiridium(IV) complexes: crystal structure of $[Ir(phen)Cl_4]$, 2483–90
The direct electrochemical synthesis of tin(II) derivatives of aromatic

ELECTROCHEMISTRY (contd)
1,2-diols, and a study of their oxidative addition reactions, 2539–44
The syntheses and electrochemistry of some molybdenum mononitrosyl complexes containing the tripodal ligand $[Co(\eta^5\text{-}C_5H_5)\{P(=O)(OEt)_2\}_3]^-$, 2769–74
ELECTRON DIFFRACTION
The molecular structure of gaseous trimethylarsenic difluoride as determined by electron diffraction, 451–6
Synthesis and characterization of a new double perovskite: $LaCaMnCoO_6$, 775–80
Electron diffraction study of the molecular structures of monomethylsilyl isocyanate and monomethylsilyl isothiocyanate in the gas phase, 1193–8
The molecular structure of hexaborane(12) in the gas phase as determined by electron diffraction, 2335–40
ELECTRONIC
Spectroscopic studies on matrix isolated osmium pentafluoride oxide, osmium tetrafluoride oxide, and osmium difluoride trioxide, 61–6
Spectrophotometric and conductometric study of cobalt(II) bromide–dimethyl sulphoxide solutions, 369–72
A model for the interpretation of the absorption and circular dichroism spectra of tris(di-imine) complexes of iron(II) and ruthenium(II), 393–400
Spectroscopic studies on the hexafluorides of rhenium, osmium, iridium, and platinum isolated in low-temperature matrices, 1341–6
Electronic spectrum and metal–ligand bonding parameters of the $V(H_2O)_6^{3+}$ ion, 1393–6
Ligand-field analysis of the ion VO^{2+}: application of the angular overlap model to the electronic absorption spectrum of bis-(acetylacetonato)oxovanadium(IV) in various solvents, 1665–70
Structure, vibrational and electronic spectra, and bonding in *trans*-diaquabis(oxalato)vanadate(III) complex salts, $A[V(C_2O_4)_2(H_2O)_2]\cdot xH_2O$ (A = Cs, K, or NH_3Me), and the *X*-ray crystal structure of the potassium salt ($x = 3$), 2245–54
An electron spin resonance and optical study of the behaviour of $Cs_2[TcNCl_5]$ in hydrochloric acid solutions, 2585–90
Molten acetamide–potassium thiocyanate eutectic: spectroscopy of first-row transition metal compounds in a room temperature melt, 2701–4
ELECTRON MICROSCOPY
Analytical electron microscopy discloses actual structure of zinc–graphite, 2023–6
ELECTRON TRANSFER
Kinetics of the reaction between hypochlorous acid and hexacyanoferrate(II) ion in aqueous solution, 273–6
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 7. Compounds containing strongly interacting redox centres derived from *para*-substituted anilines and phenols, 293–300
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 8. Complexes exhibiting weak or intermediate interaction between two redox centres, 301–8
Kinetics of oxidation of uranium(IV) by permanganate ion in aqueous perchlorate media, 601–4
Kinetics and mechanism of oxidation of β-phenylalanine by permanganate ion in aqueous perchloric acid, 605–10
Oxidation of ascorbic acid by copper(II) and the ferrocenium ion in acetonitrile–water mixtures, 733–40
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution, 943–6
Kinetics of the oxidation of hydrogen azide (hydrazoic acid) by bis(2,2′-bipyridine)manganese(III) ions in aqueous perchlorate media, 1331–6
Cerium(IV)-induced decarboxylation of penta-ammine oxaloacetatocobalt(III) perchlorate, 1413–6
Studies on metal complexes of *ortho*-quinone mono-oximes. Part 6. Redox behaviour of bis(4-chloro-1,2-benzoquinone 2-oximato)-copper(II) and -nickel(II); synthesis and characterization of reduced species containing a paramagnetic ligand, 1497–500
A kinetic investigation on the oxidation of platinum(II) complexes by hexachloroiridate(IV). Role of steric hindrance, 1577–82
Significant phosphine ligand effect on the photochemical reactivity of $[Cu(N\text{–}N)L_2]^+$ (N–N = 1,10-phenanthroline or 2,9-dimethyl-1,10-phenanthroline; L = tertiary phosphine), 1641–4
Studies on transition-metal oxo and nitrido complexes. Part 9. Periodato and tellurato oxo-ruthenium complexes as organic oxidants. *X*-Ray crystal structure of *trans*-$NaK_5[RuO_2(HIO_6)_2]\cdot 8H_2O$, 1983–8
Anaerobic oxidation of cysteine to cystine by iron(III). Part 2. The reaction in basic solution, 2109–12
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution **(1988, 943)**, 2243
Formation and peroxidatic properties of coprohaem Compound I, 2267–72
Kinetic studies of the reduction of nickel oxime complexes by tris(1,10-phenanthroline)cobalt(II) and hydroquinone in aqueous media, 2279–86
Synthesis and oxidation reactions of mono- and di-nuclear rhodium carbonyl complexes of (*o*-diphenylphosphino-phenyl)amine, H_2L; *X*-ray structure analysis of a rhodium(II) amido-bridged dimer, $[\{Rh(\mu\text{-}HL)(CO)Cl\}_2]\cdot EtOH$, 2287–92
On the reduction of iron–sulphur clusters under carbon monoxide, 2329–34
A new approach to measurement of the donor strength and co-ordination chemistry of various solvents by oxidation of metal amalgam electrodes in dichloromethane, 2379–84
Ruthenium(IV)–oxo complexes: a novel hydrophobic effect of tertiary phosphine ligands on the selective oxidation of alcohols, 2385–92
Kinetics of redox reactions between complexes of molybdenum and iron: the oxidation of iron(II) by molybdenum(VI) and of $[Mo(H_2O)_6]^{3+}$ by $[Fe(H_2O)_6]^{3+}$, 2397–402
The oxidation of alkyne-bridged dimolybdenum complexes, 2509–12
Preparation and redox properties of the cuboidal molybdenum(III) aqua ion $[Mo_4S_4(H_2O)_{12}]^{4+}$, 2579–84
Reactions of 1,2-dicarbonyls with metallic copper under argon and dioxygen. Oxidative C–C bond scission by metallic copper, 2663–8
Redox reactions of osmium porphyrins, 2705–12
Protonation *versus* oxidation in the reactions of trifluoroacetic acid with dinuclear osmium(I) complexes: molecular structure of $[Os_2(MeCO_2)_2(\mu\text{-}H)(CO)_4(PMe_2Ph)_2][PF_6]$, 2753–8
Studies on olefin-co-ordinating transition metal carbene complexes. Part 12. Novel synthesis and structural characterization of (η^6-arene)dicarbonyliron complexes, and their oxidation products, 2803–8
Preparation, characterisation, and intramolecular electron-transfer studies on the penta-ammineruthenium histidine-modified high-potential iron–sulphur protein from *Chromatium vinosum*, 2843–50
Reactions of 1,2-dicarbonyls with metallic copper under argon and dioxygen. Oxidative C–C bond scission by metallic copper, **(1988, 2663)**, 3063
EQUILIBRIUM
Spectrophotometric and conductometric study of cobalt(II) bromide–dimethyl sulphoxide solutions, 369–72
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 421–6
Solvent effects on the protonation constants of *N*,*N*′-bis(2-carbamoylethyl)ethylenediamine and the equilibrium constants for its copper(II) complexes in methanol–water mixtures, 541–4
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution **(1988, 421)**, 1107
Thermodynamics of extraction equilibria. Part 7. Solvent extraction of thorium nitrate with tri-n-butyl phosphate, 1813–6
Complex equilibria in aqueous solutions of Ti^{3+}–glycine and –malonic acid, 2231–4
Determination of the thermodynamic equilibrium constants of ion exchange process, 2565–8
E.S.R.
Synthesis, crystal and molecular structure of tetraphenylarsonium bis(maleonitriledithiolato)tellurate(II), $[AsPh_4]_2[Te(mnt)_2]$, and single-crystal electron spin resonance spectra of the system $[AsPh_4]_2[Cu/Te(mnt)_2]$, 97–100
Substituent effects on rhenium and phosphorus hyperfine coupling constants of organometallic rhenium(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 123–8

E.S.R (contd)
Electron spin resonance studies of the solution photochemistry of octacyanotungstate(v) ions at 77 and 293 K, 285–92
Crystal and molecular structure of bis(tetraphenylphosphonium) bis(1,2-dicyanoethylene-1,2-dithiolato)oxovanadate(IV). Its single-crystal electron spin resonance as a pure compound and diluted in the isomorphous molybdenum(IV) compound, 309–14
Synthesis, reactions and copper(II), nickel(II), and zinc(II) complexes of *N*-(2-pyridinyl)ketothioacetamides, 433–44
Unusual changes in hyperfine coupling constants observed for copper(II) complexes with *N*,*N*-bis(benzimidazol-2-ylmethyl)amine and its homologues; *X*-ray crystal structure determinations of $[CuL^{Pr^i}(NO_3)(MeOH)]NO_3$, $[CuL^{Bu^t}(NO_3)(MeOH)]NO_3$, $[CuL^{Bu^t}(NO_3)]NO_3$, and $[CuL^{Bu^t}(NO_3)]NO_3$, 691–700
A single-crystal electron spin resonance study of manganese(II)-doped zinc maleate tetrahydrate, 983–6
Association and orientation of copper(II) tetra-t-butylphthalocyaninate in multilayer Langmuir–Blodgett films as determined by electron paramagnetic resonance spectroscopy, 1583–90
An electron spin resonance and optical study of the behaviour of $Cs_2[TcNCl_5]$ in hydrochloric acid solutions, 2585–90
Intermolecular dimerisation of copper porphyrins and their radical cations. An electron spin resonance study, 2681–2
Electron spin resonance studies of organometallic manganese(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 2695–700

ETHANOATE
Silver(I)–phenoxyalkanoates. The crystal and molecular structures of polymeric [(4-chloro-2-methylphenoxy)ethanoato-*O*,*O*′]silver(I), [(2,4-dichlorophenoxy)ethanoato-*O*,*O*′]silver(I), and di-μ-[(2-chlorophenoxy)ethanoato-*O*,*O*′]disilver(I)–silver(I) perchlorate (1/1), 2353–6

ETHENYL
An improved route to the synthesis of μ-(alkane- or arene-thiolato)(μ-ethenyl)di-iron complexes. Crystal structure of μ-phenylmethanethiolato-μ-(1,2-diphenylethenyl)-hexacarbonyldi-iron(*Fe–Fe*), 281–4

ETHYLENE
Reactivity of *o*-diphenylphosphinobenzaldehyde toward $[Pt(C_2H_4)(PPh_3)_2]$. *X*-Ray structure of $[Pt(OCC_6H_4PPh_2\text{-}o)H(PPh_3)]\cdot C_6H_6$, 1833–6

ETHYLENEDIAMINE
Neutral chain bromide- and iodide-bridged platinum(II,IV) complexes of 1,2-diaminoethane and thiocyanate: synthesis, electronic, infrared, Raman, and resonance-Raman studies, 73–8
Crystal structure and magnetic properties of the complex $[Cu(en)_2]_2[\{Fe(edta)\}_2O]\cdot 2H_2O$. A heterobimetallic Cu^{II}– Fe^{III} system containing a μ-oxo-di-iron(III) moiety, 2747–52

ETHYLENEDIAMINETETRA-ACETATE
Crystal structure and magnetic properties of the complex $[Cu(en)_2]_2[\{Fe(edta)\}_2O]\cdot 2H_2O$. A heterobimetallic Cu^{II}– Fe^{III} system containing a μ-oxo-di-iron(III) moiety, 2747–52

ETHYLENEDITHIOLATE
Crystal and molecular structure of bis(tetraphenylphosphonium) bis(1,2-dicyanoethylene-1,2-dithiolato)oxovanadate(IV). Its single-crystal electron spin resonance as a pure compound and diluted in the isomorphous molybdenum(IV) compound, 309–14
Crystal structure of $NH_4[Ni\{S_2C_2(CN)_2\}_2]\cdot H_2O$, the first equidistant stack d^7 monoanion metal dithiolene complex, 1689–92

EUTECTIC
Molten acetamide–potassium thiocyanate eutectic: spectroscopy of first-row transition metal compounds in a room temperature melt, 2701–4

EXAFS
An investigation of non-stoicheiometry in the systems $SrFeO_{3-y}$ and $SrCoO_{3-y}$ by iron and cobalt *K*-edge extended *X*-ray absorption fine structure spectroscopy, 83–8

EXCHANGE
Pillar chemistry. Part 4. Palladium(II)–2,2′-bipyridyl, –1,10-phenanthroline, and –2,9-dimethyl-1,10-phenanthroline complex pillars in α-zirconium phosphate, 851–8

FERROCENE
Preparation and properties of inclusion compounds of ferrocene and its derivatives with cyclodextrins, 729–32
Analysis of substituted ferrocenes by infrared spectroscopy, 1383–92
Crystal structures of *o*-, *m*-, and *p*-nitrophenylferrocenes and their relevance to other sterically crowded phenylferrocenes, 1549–56

FERROCENIUM
Oxidation of ascorbic acid by copper(II) and the ferrocenium ion in acetonitrile–water mixtures, 733–40

FILM
Association and orientation of copper(II) tetra-t-butylphthalocyaninate in multilayer Langmuir–Blodgett films as determined by electron paramagnetic resonance spectroscopy, 1583–90

FLUORIDE
Spectroscopic studies on matrix isolated osmium pentafluoride oxide, osmium tetrafluoride oxide, and osmium difluoride trioxide, 61–6
Tetra-arylfluorophosphoranes, 277–80
The molecular structure of gaseous trimethylarsenic difluoride as determined by electron diffraction, 451–6
Matrix isolation and mass spectrometric studies on the vaporisation of OsO_2F_3: characterisation of molecular OsO_2F_3, 997–1000
Spectroscopic studies on the hexafluorides of rhenium, osmium, iridium, and platinum isolated in low-temperature matrices, 1341–6

FLUXIONALITY
A case of solid–state isomerism for a rhodium carbonyl cluster anion. Synthesis, characterization in solution and *X*-ray crystallographic structures of the salts $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot Me_2CO$ and $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot C_6H_5Me$, 163–72
Stereochemical non-rigidity of dithioether complexes of trimethylplatinum(IV) halides. *X*-Ray crystal structures of $[PtClMe_3(MeSCH_2CH_2SEt)]$ and $[PtIMe_3(MeSCH_2CH_2SBu^t)]$, 521–32
Synthesis, single-crystal *X*-ray structures, and fluxional behaviour of 1,2-$[Os_3(CO)_{10}(\mu\text{-dppe})]$ and its protonated derivative 1,2-$[Os_3(\mu\text{-}H)(CO)_{10}(\mu\text{-dppe})][PF_6]$ where dppe = $Ph_2PCH_2CH_2PPh_2$, 579–86
Stereochemical non-rigidity in rhodium–triruthenium clusters studied by nuclear magnetic resonance spectroscopy, 675–84
Metallation of aliphatic carbon atoms. Part 5. Synthesis and characterization of the cyclopalladated complexes of 2-(trimethylsilyl)pyridine and their dynamic behaviour observed by proton nuclear magnetic resonance spectroscopy, 785–90
Hydride fluxionality in high-nuclearity osmium carbonyl clusters, 1517–22
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. ^{109}Ag-$\{^1H\}$ INEPT nuclear magnetic resonance studies on $[Ag_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 1, 2, or 4) and *X*-ray crystal structure of $[Ag_2Ru_4(\mu_3\text{-}H)_2(\mu\text{-}Ph_2PCH_2PPh_2)(CO)_{12}]$, 2177–86
The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_nEPh_2\}(CO)_{12}]$ (M = Cu or Ag; E = As or P; n = 1 or 2). *X*-Ray crystal structure of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_2PPh_2\}(CO)_{12}]$, 2787–96
Co-ordinatively unsaturated alkyne complexes of tungsten: synthesis and dynamic nuclear magnetic resonance studies of some but-2-yne derivatives, 2855–64

FORMALDEHYDE
Iron–formaldehyde interaction: *'ab initio'* calculations on the model compounds $[Fe(CO)_{4-n}(PH_3)_n(\eta^2\text{-}CH_2O)]$ (n = 0, 2, or 4), 321–8

FORMAMIDE
The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 1. Reactivity of mixed carbonyl(formamido)(phosphine)rhenium(I) complexes with RNCS (R = Ph or *p*-MeC_6H_4) and PhNCO. Crystal structure of the thiazetidine rhenium(I) complex $[Re(CO)_2(PPh_3)_2\{PhN{=}C(OEt)\text{–}S\}]$, 1853–6

FORMATE
Insertion of carbon dioxide into a molybdenum–hydrogen bond. Photochemical formation of hydridoformato complex of molybdenum(II), 2241–2

FORMYL
Study of relative stabilities of the intermediates in catalytic carbon monoxide hydrogenation reactions: *ab initio* calculations on the

FORMYL (contd)
model compounds $[Fe(CO)_2(PH_3)_2H_2]$, $[Fe(CO)_2(PH_3)_2(CHO)H]$, $[Fe(CO)_2(PH_3)_2(CH_2O)]$, and $[Fe(CO)(PH_3)_2(CHO)_2]$, 249–52
Reactivity of cationic molybdenum(II) complexes. Part 1. Hydride reduction of the 18 electron complexes $[Mo(CO)_3(\eta\text{-}C_5Me_5)L]^+$ [L = PPh_3 or $P(OMe)_3$] and isolation of the thermally stable formyl complex *cis*-$[Mo(CO)_2(\eta\text{-}C_5Me_5)\{P(OMe)_3\}(CHO)]$. Crystal structure of $[Mo(CO)_3(\eta\text{-}C_5Me_5)(PPh_3)]BF_4 \cdot 0.5MeOH$, 329–34
Experimental and theoretical studies of the reactions of electrophiles with cationic formyl complexes; formation of methoxy- and hydroxy-carbene complexes of ruthenium(II) and osmium(II), 1079–82
GALLIUM
Water-soluble hexadentate Schiff-base ligands as sequestrating agents for iron(III) and gallium(III), 2927–34
GERMANIUM
Surface acidity of the layered pyrophosphates of quadrivalent Ti, Zr, Ge, and Sn and their activity in some acid-catalysed reactions, 881–6
Synthesis and electrode reactions of difluorogermanium(IV) porphyrins. Molecular stereochemistry and crystal structure of difluoro(2,3,7,8,12,13,17,18-octaethylporphyrinato)germanium(IV), 1109–14
Synthesis and characterization of diazido–germanium(IV) and -tin(IV) porphyrins. Crystal structure of diazido(5,10,15,20-tetra-*p*-tolylporphyrinato)germanium(IV), 1921–6
Synthesis and characterization of bis(phenyltetrazolato)-germanium(IV) and -tin(IV) porphyrins, 2569–72
Transition-metal carbonyl derivatives of the germanes. Part 17. Tetracarbonylgermyl(trimethylgermyl)iron, $[Fe(CO)_4(GeH_3)(GeMe_3)]$, its conversion into $[\{Fe(CO)_4(GeH_2)\}_2]$, and hence to $[Co_4Fe_2Ge_2(CO)_{21}]$ (characterised by *X*-ray crystallography) *via* $[Co_4Fe_2Ge_2(CO)_{22}]$, 2629–34
Transition-metal carbonyl derivatives of the germanes. Part 18. Tetracarbonylbis(permethylgermyl)iron compounds $[Fe(CO)_4(GeMe_{3-x}H_x)(GeMe_{3-y}H_y)]$ for x,y = 0—3, 2635–44
GLYCINE
Complex equilibria in aqueous solutions of Ti^{3+}–glycine and –malonic acid, 2231–4
GLYCOLATE
Analysis of multinuclear lanthanide induced shifts. Part 5. The co-ordination polyhedron of 1:3 lanthanide(III)–glycolate complexes in aqueous solution, 717–24
Lanthanide(III)-catalysed addition of glycolate to maleate. Investigation of intermediates using multinuclear magnetic resonance spectroscopy, 2723–8
GOLD
^{197}Au Mössbauer spectra of complexes of bis(diphenylphosphino)amine containing gold(I), gold(II), and gold(III), 23–6
Synthesis of benzyl- or pentafluorobenzyl-diphenylphosphonio(diphenylphosphino)methanide complexes of gold(I) and gold(III) and their use as C-donor ligands, 155–8
Synthesis of Group 1B sandwich cluster compounds with $[Pt_3(\mu\text{-}CO)_3(PPh_3)_3]$ and the structural characterisation of $[M\{Pt_3(\mu\text{-}CO)_3(PPh_3)_3\}_2]PF_6$ (M = Au or Cu) by single-crystal *X*-ray techniques, 335–40
Reactions of pentafluorophenyl(ylide)-silver(I) or -gold(I) complexes with chlorobis(pentafluorophenyl)thallium(III), 701–4
The heteronuclear cluster chemistry of the Group 1B metals. Part 5. *X*-Ray crystal structure and dynamic behaviour of the heptanuclear mixed-metal cluster $[Au_3Ru_4(\mu\text{-}H)(CO)_{12}(\mu\text{-}Ph_2PCH_2PPh_2)(PPh_3)]$, 751–6
An iron-57 and gold-197 Mössbauer spectroscopic investigation of the bonding in two gold–iron cluster compounds, 781–4
Synthesis, reactivity, and spectroscopic studies of some tetranuclear osmium clusters. Structural characterization of $[Os_4H(CO)_{12}\{\mu_3\text{-}NC(O)Me\}\{M(PPh_3)\}]$ (M = Au or Cu) and $[N(PPh_3)_2][Os_4H_2(CO)_{12}I]$, 913–24
Mixed-metal carbido carbonyl clusters. Part 3. Synthesis and structural characterization of $[Rh_6C(CO)_{15}\{Ag(NCMe)\}_2] \cdot 0.5MeOH$, $[Rh_6C(CO)_{15}\{M(PPh_3)\}_2]$ (M = Cu, Ag, or Au), and of the anion $[Rh_6C(CO)_{15}\{Au(PPh_3)\}]^-$ as its PPh_4^+ salt, 1237–48
Co-ordination chemistry of higher oxidation states. Part 26. Spectroscopic studies of tellurate complexes of the trivalent Group 1B metals. *X*-Ray structure of $Na_8[Cu\{TeO_4(OH)_2\}_2] \cdot 16H_2O$, 1377–82
Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of $[(\eta^5\text{-}C_5H_5)(OC)_2Mo\{\mu\text{-}Ag(PPh_3)\}(\mu\text{-}PPh_2)Mn(CO)_4]$ and $[(\eta\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}I)(\mu\text{-}PPh_2)Mn(CO)_4]$, 1683–8
Mixed rhenium–gold polyhydrides that contain ReAu and $ReAu_2$ cores, 1701–4
Synthesis and structural characterisation of a novel high-nuclearity gold–tin cluster compound, $[Au_8(PPh_3)_7(SnCl_3)]_2[SnCl_6]$, 1751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)\{\mu\text{-}Ph_2E(CH_2)_nE'Ph_2\}(CO)_{12}]$ (n = 1 or 2, E = E′ = As or E = As, E′ = P; n = 2, E = E′ = P). *X*-Ray crystal structure of $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)(\mu\text{-}Ph_2AsCH_2PPh_2)(CO)_{12}]$, 1795–802
Synthesis of new heteronuclear complexes with bridging carbyne ligands between tungsten and gold. *X*-Ray crystal structure of $[AuW(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_2(bipy)(C_6F_5)Br]$, 1957–62
Syntheses and reactivity of acetylide-containing clusters of Group 1B metals. Stepwise syntheses of trinuclear $[Au_2Cu(C_2Ph)_4]^-$ and pentanuclear $[Au_3Cu_2(C_2Ph)_6]^-$ and $[Au_3Ag_2(C_2Ph)_6]^-$ clusters, 2297–300
Mono- and bi-nuclear four-membered methanide auracycles; synthesis and reactivity. *X*-Ray structure of *cis*-$[Au(C_6F_5)_2(SPPh_2O)(CH_2PPh_2Me)]$, 2323–8
Studies on gold(II) complexes with hard and soft donor ligands. Part 1. Complexes with *o*-aminobenzenethiol, 2607–14
Addition of halogens to $[\{Au(CH_2)_2PPh_2\}_2RX]$ complexes. The structures of *cis,trans*-$[\{Au(CH_2)_2PPh_2\}_2(CH_2CF_3)Br_3]$ and *trans,trans*-$[\{Au(CH_2)_2PPh_2\}_2(CHCl_2)Br_2Cl]$, 2669–74
GRAPHITE
Analytical electron microscopy discloses actual structure of zinc–graphite, 2023–6
GUANOSINE
Binary and ternary metal complexes of guanosine: stability and thermodynamic parameters, 67–72
HALIDE
Neutral chain bromide- and iodide-bridged platinum(II,IV) complexes of 1,2-diaminoethane and thiocyanate: synthesis, electronic, infrared, Raman, and resonance-Raman studies, 73–8
Electrochemical and spectroscopic studies on tetranuclear $[\{Re(\mu_3\text{-}X)(CO)_3\}_4]$ (X = Cl, Br, or I) and acetonitrile complexes derived therefrom, 245–8
Hydrofluoric and hydrochloric acid behaviour in concentrated saline solutions, 705–10
Reductive nitrosylation of tetraoxometallates. Part 14. Generation and proton induced disproportionation of the $Re(NO)^{3+}$ moiety. Synthesis, characterisation, and electrochemistry of novel hydroxo- and halogeno-nitrosyl complexes of rhenium, 793–802
Lewis-base adducts of main Group 1 metal compounds. Part 3. Synthesis and structural systematics of $[LiXL_3]$ and $[L'_2LiX_2LiL'_2]$ systems (X = Cl, Br, or I; L = 3,5-$Me_2C_5H_3N$, L′ = 2-MeC_5H_4N), 991–6
Two compounds containing dinuclear three-co-ordinated halogenoargentate(I) anions: crystal structures of bis(tetraphenylphosphonium) di-μ-chloro-dichlorodiargentate(I) and bis(tetraphenylphosphonium) di-μ-bromo-dibromodiargentate(I), 2117–20
Synthesis and chemical characterization of the hexanuclear anions $[Ir_6(CO)_{14}X]^-$ (X = Cl, Br, I, or SCN). Crystal and molecular structures of $[PPh_4][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}Br)]$ and $[N(PPh_3)_2][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}X)]$ (X = I or SCN), 2307–14
2-Pyridyl- and quinolin-2-yl-functionalised organyltellurium ligands. The stabilisation of diorganyl tritellurides. The crystal and molecular structures of 2-(2-pyridyl)phenyltellurium(IV) tribromide, dimethyldithiocarbamato[2-(2-pyridyl)phenyl]tellurium(II), and *p*-ethoxyphenyl 2-(2-pyridyl)phenyl telluride, 2363–72
Co-ordination chemistry of higher oxidation states. Part 27. Synthesis, properties, and electrochemistry of some *cis*-tetrahalogenoiridium(IV) complexes: crystal structure of $[Ir(phen)Cl_4]$, 2483–90
Addition of halogens to $[\{Au(CH_2)_2PPh_2\}_2RX]$ complexes. The structures of *cis,trans*-$[\{Au(CH_2)_2PPh_2\}_2(CH_2CF_3)Br_3]$ and

HALIDE (contd)
trans,trans-[{$Au(CH_2)_2PPh_2$}$_2$($CHCl_2$)Br_2Cl], 2669–74
Crystal structures and magnetic properties of the mono-μ-halogeno-bridged copper(II) chains Cu(pcpci)X [pcpci = *N*-(2′-pyridylcarbonyl)pyridine-2-carboximidate, X = Cl or Br], 3041–6
HALOGENOMETHYL
A study of the generality of the reaction of diazomethane with halogenoplatinum(II) complexes in the preparation of (halogenomethyl)platinum(II) complexes, 1773–80
HETEROCYCLE
The reactions of [$Ru_3(CO)_{12}$] with nitrogen-containing heterocycles. Crystal structures of [Ru_3(μ-H)(μ$_3$-ppy)$(CO)_9$] and [Ru_3(μ-napy)(μ-CO)$_3(CO)_7$], 1437–44
HETEROPOLYANION
Aquanonadecatungstodiphosphate(14−) polyanion, [$P_2W_{19}O_{69}(OH_2)$]$^{14-}$: *X*-ray crystallographic structure of its potassium salt, chemical relationships in the tungstophosphate system, and conversion into the diaquaicosatungstodiphosphate [$P_2W_{20}O_{70}(OH_2)_2$]$^{10-}$, 2411–20
HEXABORANE
The molecular structure of hexaborane(12) in the gas phase as determined by electron diffraction, 2335–40
HEXYNE
Reorientation of the alkyne moiety in the heterometallic cluster [$FeCo_2(CO)_9(EtC_2Et)$], induced by phosphine, phosphite, or isonitrile substitution for CO. Crystal structure of [$FeCo_2(CO)_8(PPh_3)(EtC_2Et)$], 1249–58
HYDRAZIDE
Diazoalkane complexes of molybdenum and tungsten *via* hydrazido(2−)-complexes, 553–6
Organohydrazido(2−) complexes of molybdenum and tungsten from α,ω-dibromides; crystal and molecular structures of (azetidinylimido)bis[1,2-bis(di-*p*-tolylphosphino)ethane]-bromotungsten bromide–dichloromethane (1/3), 2525–34
The protonation of molybdenum and tungsten bis(diphosphine)-bis(dinitrogen) complexes: the crystal and molecular structure of bis[1,2-bis(diethylphosphino)ethane]bromo[hydrazido(2−)]-tungsten bromide–methanol (2/1), 2545–54
Organic chemistry of dinitrogen and related ligands. Part 7. *N*-Vinylation or oxidative replacement of the hydrazido(2−) ligand in reactions of [$WX(dppe)_2(NNH_2)$]Y (dppe = $Ph_2PCH_2CH_2PPh_2$, X = F or Br, Y = BF_4 or Br) with cyanoalkenes. *X*-Ray crystal structure of [$WBr(dppe)_2${$NC(Br)C(CN)C(CN)_2$}], 2781–6
HYDRAZINE
The chemistry of dinitrogen residues. Part 5. [Tris(pyrazolyl)borato]-complexes of titanium(III); the crystal structures of trimethylhydrazinium trichloro[tris(3,5-dimethylpyrazolyl)borato]titanate(III) and dichloro(3,5-dimethylpyrazole)-[tris(3,5-dimethylpyrazolyl)borato]titanium(III), 1153–8
Nucleophilic (Michael) additions to $(Ph_2P)_2C{=}CH_2$ when chelated to dimethylplatinum(II), di(*o*-tolyl)platinum(II), or iodo(trimethyl)platinum(IV). Crystal structure of [$PtMe_3I${$(PPh_2)CH(PPh_2)CH_2NHCH_2Ph$}], 3011–6
HYDRAZOBENZENE
Dicopper(I) complexes containing intramolecular 1,2-diaza bridging ligands. Behaviour of the dicopper site in the dehydrogenation of hydrazobenzene. Crystal structure of [$Cu_2L^2(pydz)_2$][ClO_4]$_2$, 347–52
HYDRAZONE
Synthesis and characterization of pentagonal-bipyramidal mercury(II) complexes with 2,6-diacetylpyridine bis(2′-pyridylhydrazone). *X*-Ray structure of [2,6-diacetylpyridine bis(2′-pyridylhydrazone)]mercury(II) tetrachloro-mercurate(II), 1479–86
HYDRIDE
Stepwise construction of [$Os_6(CO)_{18}(\mu_6\text{-P})]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of [Os_6(μ-H)$_2(CO)_{20}$(MeCN)(μ$_3$-PH)] and [PPh_3Me][$Os_6(CO)_{18}(\mu_6\text{-P})$], 173–82
Study of relative stabilities of the intermediates in catalytic carbon monoxide hydrogenation reactions: *ab initio* calculations on the model compounds [$Fe(CO)_2(PH_3)_2H_2$], [$Fe(CO)_2(PH_3)_2$(CHO)H], [$Fe(CO)_2(PH_3)_2(CH_2O)$], and [$Fe(CO)(PH_3)_2(CHO)_2$], 249–52
Reactivity of cationic molybdenum(II) complexes. Part 1. Hydride reduction of the 18 electron complexes [$Mo(CO)_3(\eta\text{-}C_5Me_5)L]^+$ [L = PPh_3 or $P(OMe)_3$] and isolation of the thermally stable formyl complex *cis*-[$Mo(CO)_2(\eta\text{-}C_5Me_5)${$P(OMe)_3$}(CHO)]. Crystal structure of [$Mo(CO)_3(\eta\text{-}C_5Me_5)(PPh_3)$]$BF_4$·0.5MeOH, 329–34
Mechanistic studies on iron phosphine complexes. Part 1. Protonation and substitution of *trans*-[FeH(X)(diphosphine)$_2$] (X = Cl or Br, diphosphine = $Et_2PCH_2CH_2PEt_2$ or $Ph_2PCH_2CH_2PPh_2$), 509–14
Mechanistic studies on iron phosphine complexes. Part 2. Protonation and substitution reactions of dinitrogen complexes, 515–20
Synthesis, single-crystal *X*-ray structures, and fluxional behaviour of 1,2-[$Os_3(CO)_{10}$(μ-dppe)] and its protonated derivative 1,2-[Os_3(μ-H)$(CO)_{10}$(μ-dppe)][PF_6] where dppe = $Ph_2PCH_2CH_2PPh_2$, 579–86
The synthesis of di- and tetra-nuclear *p*-cymene–osmium hydride complexes; characterisation by $^1H\{^{187}Os\}$ reverse INEPT two-dimensional nuclear magnetic resonance spectroscopy, 629–34
Iridium(III) *cis*-dihydrido complexes with 3,6-bis(2′-pyridyl)pyridazine. Crystal structure of the pyridazinyl complex [{$IrH_2(PPh_3)_2$}$_2$(μ-$C_4HN_2(C_5H_4N)_2$-3,6}]PF_6, 651–6
Stereochemical non-rigidity in rhodium–triruthenium clusters studied by nuclear magnetic resonance spectroscopy, 675–84
The heteronuclear cluster chemistry of the Group 1B metals. Part 5. *X*-Ray crystal structure and dynamic behaviour of the heptanuclear mixed-metal cluster [Au_3Ru_4(μ-H)$(CO)_{12}$(μ-$Ph_2PCH_2PPh_2$)(PPh_3)], 751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 6. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds [M_2Ru_4(μ$_3$-H)$_2$}{μ-$Ph_2P(CH_2)_nPPh_2$}$(CO)_{12}$] (M = Cu or Ag, *n* = 1—6). *X*-Ray crystal structures of [Cu_2Ru_4(μ$_3$-H)$_2$}{μ-$Ph_2P(CH_2)_nPPh_2$}$(CO)_{12}$] (*n* = 2, 3, or 5), 757–68
Hydrido-clusters derived by protonation, hydrogenation, or photolytic decarbonylation of the chelating diphosphine compounds 1,1-[$Os_3(CO)_{10}$(diphosphine)] where diphosphine is $Ph_2PCH_2CH_2PPh_2$ or $Ph_2PCH_2CH_2CH_2PPh_2$, and crystal structure of [OsH_2{$Ph_2P(CH_2)_3PC_6H_4$}$(CO)_8$]·0.5CH_2Cl_2, 827–32
Synthesis, reactivity, and spectroscopic studies of some tetranuclear osmium clusters. Structural characterization of [$Os_4H(CO)_{12}$}{μ$_3$-NC(O)Me}{$M(PPh_3)$}] (M = Au or Cu) and [$N(PPh_3)_2$][$Os_4H_2(CO)_{12}I$], 913–24
Selective hydrogenation of PhCH=CHCOMe to the unsaturated alcohol catalysed by [$IrH_3(PR_3)_3$] (R = alkyl or aryl), 947–52
A reconsideration of the role of slippage in the activation of co-ordinated olefins towards nucleophilic attack, 1037–44
Chemistry of phosphido-bridged dimolybdenum complexes. Part 1. High-yield synthesis of [$Mo_2(\eta^5\text{-}C_5H_5)_2$(μ-H)(μ-$PPh_2$)$(CO)_4$] and its reactions with organophosphorus ligands: *X*-ray crystal structure of [$Mo_2(\eta^5\text{-}C_5H_5)_2$(μ-H)(μ-$PPh_2$)$(CO)_3${$P(OMe)_3$}], 1083–8
Stepwise construction of [$Os_6(CO)_{18}(\mu_6\text{-P})]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of [Os_6(μ-H)$_2(CO)_{20}$(MeCN)(μ$_3$-PH)] and [PPh_3Me][$Os_6(CO)_{18}(\mu_6\text{-P})$] (**1988, 173**), 1107
Hydrido platinum metal macrocyclic complexes: the synthesis and single-crystal *X*-ray structure of *cis*-[$IrCl(H)L^1$]PF_6 {L^1 = 7-methyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 1165–8
Synthesis and characterisation of the tetranuclear phosphinidene clusters [$Os_3MH_2(CO)_{12}$(PR)] (M = Os, R = Ph or cyclo-C_6H_{11} (M = Ru, R = cyclo-C_6H_{11}) and the crystal and molecular structure of [Os_4(μ-H)$_2(CO)_{12}$(μ$_3$-PC_6H_{11})], 1199–204
X-Ray crystal structures of two isomers of the hydrido–carbonyl anion [Re_7(μ-H)$C(CO)_{21}]^{2-}$. The problematic existence of triply bridging hydrides in clusters containing interstitial main-group elements, 1281–8
Tri-, tetra-, penta-, and hexa-nuclear phenylphosphinidene-capped products from the reaction of dodecacarbonyl triruthenium with phenylphosphine: crystal structures of [Ru_4(μ$_4$-PPh)$_2$(μ-CO)$(CO)_{10}$], [Ru_5(μ$_4$-PPh){μ-PPh(OPr^n)}(μ-H)$(CO)_{13}$], [Ru_6(μ$_4$-PPh)$_2$(μ$_3$-PPh)$_2(CO)_{12}$], and [Ru_6(μ$_4$-PPh)$_3$(μ$_3$-PPh)$_2(CO)_{12}$], 1315–30

HYDRIDE (contd)
Hydride fluxionality in high-nuclearity osmium carbonyl clusters, 1517–22
Hydrido-organometallic complexes of platinum(II). *X*-Ray crystal structure of *trans*-[PtH(C_6H_4F-*p*)(PPh_3)$_2$], 1617–22
Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of [(η^5-C_5H_5)(OC)$_2$Mo{μ-Ag(PPh_3)}(μ-PPh_2)Mn(CO)$_4$] and [(η-C_5H_5)(OC)$_2$Mo(μ-I)(μ-PPh_2)Mn(CO)$_4$], 1683–8
Mixed rhenium–gold polyhydrides that contain ReAu and $ReAu_2$ cores, 1701–4
The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds [Au_2Ru_4(μ_3-H)(μ-H){μ-$Ph_2E(CH_2)_nE'Ph_2$}(CO)$_{12}$] (n = 1 or 2, E = E′ = As or E = As, E′ = P; n = 2, E = E′ = P). *X*-Ray crystal structure of [Au_2Ru_4(μ_3-H)(μ-H)(μ-$Ph_2AsCH_2PPh_2$)(CO)$_{12}$], 1795–802
Preparation and characterisation of mixed bismuth and ruthenium clusters; *X*-ray crystal structures of [Ru_3(μ-H)$_3$(CO)$_9$(μ_3-Bi)], [Ru_3(CO)$_9$(μ_3-Bi)$_2$], and [Ru_4(CO)$_{12}$(μ_4-Bi)$_2$], 2091–8
Derivatives of [Rh_6(CO)$_{13}$C]$^{2-}$: solution structure of [Rh_6H(CO)$_{13}$C]$^-$ from nuclear magnetic resonance measurements and the *X*-ray crystal structure of [Rh_6(CO)$_{11}$C(μ-$Ph_2PCH_2CH_2PPh_2$)]$^{2-}$, 2103–8
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. ^{109}Ag-{^{1}H} INEPT nuclear magnetic resonance studies on [Ag_2Ru_4(μ_3-H)$_2$){μ-$Ph_2P(CH_2)_nPPh_2$}(CO)$_{12}$] (n = 1, 2, or 4) and *X*-ray crystal structure of [Ag_2Ru_4(μ_3-H)$_2$(μ-$Ph_2PCH_2PPh_2$)(CO)$_{12}$], 2177–86
Co-condensation of molybdenum atoms with the bulky tertiary diphosphine 1,2-bis(di-isopropylphosphino)ethane: the molecular structure of [MoH_4($Pr^i_2PCH_2CH_2PPr^i_2$)$_2$], 2227–30
Insertion of carbon dioxide into a molybdenum–hydrogen bond. Photochemical formation of hydridoformato complex of molybdenum(II), 2241–2
Synthesis, characterisation, and catalytic activity of a phosphinidene stabilised tethered triruthenium cluster, 2649–54
Protonation *versus* oxidation in the reactions of trifluoroacetic acid with dinuclear osmium(I) complexes: molecular structure of [Os_2($MeCO_2$)$_2$(μ-H)(CO)$_4$(PMe_2Ph)$_2$][PF_6], 2753–8
The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds [M_2Ru_4(μ_3-H)$_2$){μ-$Ph_2As(CH_2)_nEPh_2$}(CO)$_{12}$] (M = Cu or Ag; E = As or P; n = 1 or 2). *X*-Ray crystal structure of [Cu_2Ru_4(μ_3-H)$_2$){μ-$Ph_2As(CH_2)_2PPh_2$}(CO)$_{12}$], 2787–96
Dinuclear allyl and μ-vinyl complexes from the reactions of a μ-hydrido dimanganese and a μ-hydrido manganese– molybdenum complex with alkynes containing α-methyl or α-methylene substituents, 2953–8

HYDROFORMYLATION
Synthesis and hydroformylation reaction of dinuclear rhodium(I) complexes with mixed bridging ligands. *X*-Ray structure of [Rh_2(μ-pz)(μ-SBu^t)(CO)$_2${P(OMe)$_3$}$_2$], 1523–8

HYDROGENATION
Study of relative stabilities of the intermediates in catalytic carbon monoxide hydrogenation reactions: *ab initio* calculations on the model compounds [Fe(CO)$_2$(PH_3)$_2$$H_2$], [Fe($CO$)$_2$($PH_3$)$_2$(CHO)H], [Fe($CO$)$_2$($PH_3$)$_2$($CH_2O$)], and [Fe($CO$)($PH_3$)$_2$($CHO$)$_2$], 249–52
Selective hydrogenation of PhCH=CHCOMe to the unsaturated alcohol catalysed by [IrH_3(PR_3)$_3$] (R = alkyl or aryl), 947–52

HYDROGEN BONDING
f-Element–crown ether complexes. Part 9. The role of solvent hydrogen bonding: synthesis and crystal structure of aquatetrachlorotris(ethanol)thorium(IV)–1,4,7,10,13,16-hexaoxacyclo-octadecane–water (1/1/1), 13–6
Bis(acetato)bis[4-(*N*-acetylamino)pyridine]aquacopper(II)–hydrogen fluoride–hydrate (1/2/2): *X*-ray structure reveals H_2O·HF hydrogen bonded in the lattice, 1493–6

HYDROGEN FLUORIDE
Bis(acetato)bis[4-(*N*-acetylamino)pyridine]aquacopper(II)–hydrogen fluoride–hydrate (1/2/2): *X*-ray structure reveals H_2O·HF hydrogen bonded in the lattice, 1493–6

HYDROLYSIS
The pH and temperature dependent hydroiyses of [*N*,*N*-bis(2-aminoethyl)-1,2-ethanediamine]bis(solvent)cobalt(III) and bis(dimethylformamide)(1,4,7,10-tetra-azacyclododecane)cobalt(III) complexes, 47–52
Multinuclear magnetic resonance studies of the hydrolysis of aluminium(III). Part 8. Base hydrolysis monitored at very high magnetic field, 1347–56
Copper(II)-assisted hydrolysis of 2,4,6-tris(2-pyridyl)-1,3,5-triazine. Part 1. Crystal structures of [bis(2-pyridylcarbonyl)amido](2-pyridylformamide)copper(II) perchlorate monohydrate and [bis(2-pyridylcarbonyl)amido]copper(II) perchlorate, 2033–40
Complex equilibria in aqueous solutions of Ti^{3+}–glycine and –malonic acid, 2231–4

HYDROQUINONE
Kinetic studies of the reduction of nickel oxime complexes by tris(1,10-phenanthroline)cobalt(II) and hydroquinone in aqueous media, 2279–86

HYDROXIDE
Reductive nitrosylation of tetraoxometallates. Part 14. Generation and proton induced disproportionation of the $Re(NO)^{3+}$ moiety. Synthesis, characterisation, and electrochemistry of novel hydroxo- and halogeno-nitrosyl complexes of rhenium, 793–802
Reactions of polysulphide with metal–phosphine species. Synthesis and *X*-ray crystal structure of [{Ni(bppte)(μ-OH)}$_2$][ClO_4]$_2$·(CH_3)$_2$CO, 1063–6
Synthesis, magnetic properties, redox behaviour, and crystal structure of the bridged binuclear nickel(II) complex [Ni_2(μ-OH)(μ-CH_3CO_2)$_2$$L_2$]$ClO_4$·$H_2O$, 1367–70
Co-ordination chemistry of higher oxidation states. Part 26. Spectroscopic studies of tellurate complexes of the trivalent Group 1B metals. *X*-Ray structure of Na_5[Cu{TeO_4(OH)$_2$}$_2$]·16H_2O, 1377–82
Formation of carbonato and hydroxo complexes of vanadium(IV) on reaction of carbonylbis(η-pentamethylcyclo-pentadienyl)vanadium(II) with dinitrogen oxide, 2505–6

HYDROXYLAMIDE
Metal complexes of *N*-aryl-*N*-nitrosohydroxylamines: cleavage of N–N bonds to give metal nitrosyl species and organonitrogen compounds, and the crystal structure of [$RhCl_2$){ONN(C_6H_4Me-*p*)O}(H_2O)(PPh_3)]·0.5Me_2CO, 257–64

HYPERCHLOROUS ACID
Kinetics of the reaction between hypochlorous acid and hexacyanoferrate(II) ion in aqueous solution, 273–6

IMIDAZOLATE
Synthesis, characterization, and *X*-ray crystal structures of mononuclear copper(II) complexes with unsymmetrical quadridentate ligands involving an imidazole moiety and discrete imidazolate-bridged binuclear copper(II) complexes with non-identical co-ordination geometries in the binuclear unit, 1021–36
Synthesis and *X*-ray crystal structures of an imidazolate-bridged polynuclear copper(II) complex exhibiting a unique helicoid structure and its precursor mononuclear complex, 1943–8

IMIDAZOLE
Chemical reaction of metallic copper with imidazole, 1487–8

IMIDE
Synthesis and reactions of d^0 imido aryl derivatives of chromium, molybdenum, and tungsten. Crystal structures of $Cr(NBu^t)_2(C_6H_2Me_3$-2,4,6$)_2$, $Mo(NBu^t)_2(C_6H_3Me_2$-2,6$)_2$, and $Cr(NBu^t)_2$[$C(C_6H_2Me_3$-2,4,6)=NBu^t]($C_6H_2Me_3$-2,4,6), 53–60
Raman spectra of some transition-metal imido complexes, 647–50
Stereoelectronic effects in R–NSN–R systems. An MNDO and *ab initio* SCF-MO study, 3051–4

IMINE
Amine, imine, and aminocarbene complexes of platinum(II), 1147–52

IMINODIACETATE
Synthesis and spectral characterization of cobalt(III) complexes of *N*-(*o*-carboxyphenyl)iminodiacetic acid, 159–62

INCLUSION
Preparation and properties of inclusion compounds of ferrocene and its derivatives with cyclodextrins, 729–32

INDIUM
Synthesis and thermal properties of adducts of trimethylindium with nitrogen-containing Lewis bases, 7–12
Synthesis and structural studies of dimethylindium(III) complexes with polydentate nitrogen donor ligands, and of monomethylindium(III) complexes containing alkoxide-bridged binuclear cations, 35–46

INDIUM (contd)
Indium(III) halide complexes with trimethylphosphine sulphide and trimethylarsine sulphide: structures and bonding of $[InX_3(Me_3MS)_2]$ (X = Cl or Br, M = P or As) and $[InCl_3(H_2O)(Me_3AsS)_2]$, 2187–92
INDOLINYLIDENE
Functionalized isocyanides as ligands. Part 5. Syntheses and reactions of 3-(benzylphosphonio)indolin-2-ylidene complexes of platinum(II). *X*-Ray crystal structure of *trans*-$[Pt\{o\text{-}\overset{\cdot}{C}N(H)C_6H_4\overset{\cdot}{C}[P(CH_2Ph)_2Ph]\}X(PPh_3)_2]BF_4\cdot 2C_2H_4Cl_2$ (X = Cl or Br), 1803–12
INTERCALATE
Pillar chemistry. Part 4. Palladium(II)–2,2′-bipyridyl, –1,10-phenanthroline, and –2,9-dimethyl-1,10-phenanthroline complex pillars in α-zirconium phosphate, 851–8
IODIDE
Polarised neutron diffraction study of spin localisation in Nb_6I_{11}, 111–6
The solution behaviour of $[Rh_2(COMe)_2(CO)_2I_6]^{2-}$, its reactions with CO, pyridine, and methanol, and the *X*-ray structure of $[AsPh_4][Rh(COMe)(CO)(NC_5H_5)I_3]$, 489–96
Lewis base adducts of Group 11 metal(I) compounds. Part 36. The synthesis and *X*-ray crystallographic characterisation of polymeric copper(I) iodide–benzonitrile (2/1), 1637–40
Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of $[(\eta^5\text{-}C_5H_5)(OC)_2Mo\{\mu\text{-}Ag(PPh_3)\}(\mu\text{-}PPh_2)Mn(CO)_4]$ and $[(\eta\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}I)(\mu\text{-}PPh_2)Mn(CO)_4]$, 1683–8
Synthesis and spectroscopic properties of the 'mixed' seven-co-ordinate complexes $[MI_2(CO)_3L(L')]$ [M = Mo or W; L,L′ = PPh_3, $PPh_2(C_6H_{11})$, $PPh(C_6H_{11})_2$, $AsPh_3$, or $SbPh_3$] and rearrangement of selected $[MI_2(CO)_3L(L')]$ to $[HL][MI_3(CO)_3L']$. *X*-Ray crystal structure of $[PPh_2(C_6H_{11})H][WI_3(CO)_3(SbPh_3)]\cdot Et_2O$, 2729–34
The syntheses and electrochemistry of some molybdenum mononitrosyl complexes containing the tripodal ligand $[Co(\eta^5\text{-}C_5H_5)\{P(=O)(OEt)_2\}_3]^-$, 2769–74
IODOALKANE
Reactivity and mechanism in the oxidative addition of iodoalkanes and di-iodoalkanes to a dimethylplatinum(II) complex, 595–600
ION EXCHANGE
Determination of the thermodynamic equilibrium constants of ion exchange process, 2565–8
ION PAIR
Axial co-ordination and ion-pair formation for *R,S,R,S*-1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecanenickel(II) perchlorate in various mixed solvents with nitrobenzene, 1935–42
I.R.
Neutral chain bromide- and iodide-bridged platinum(II,IV) complexes of 1,2-diaminoethane and thiocyanate: synthesis, electronic, infrared, Raman, and resonance-Raman studies, 73–8
Surface acidity of the layered pyrophosphates of quadrivalent Ti, Zr, Ge, and Sn and their activity in some acid-catalysed reactions, 881–6
Infrared, Raman, and resonance-Raman spectra of $[Mo_2(O_2CCH_3)_4]$ and $[Mo_2(O_2CCD_3)_4]$, 973–82
Spectroscopic studies on the hexafluorides of rhenium, osmium, iridium, and platinum isolated in low-temperature matrices, 1341–6
Analysis of substituted ferrocenes by infrared spectroscopy, 1383–92
The photochemistry of cyclopentadienyl platinum carbonyl dimers: characterization of $[Pt_2(\mu\text{-}CO)(\eta^5\text{-}C_5R_5)_2]$ (R = H or Me) using matrix isolation and fast time-resolved infrared spectroscopy, 1501–8
The characterisation of molecular boric acid by mass spectrometry and matrix isolation infrared spectroscopy, 1645–52
Caesium tetrathiotungstate(VI). Matrix isolation and mass spectrometric studies of a ternary sulphide which is stable in the vapour, 2047–50
Structure, vibrational and electronic spectra, and bonding in *trans*-diaquabis(oxalato)vanadate(III) complex salts, $A[V(C_2O_4)_2(H_2O)_2]\cdot xH_2O$ (A = Cs, K, or NH_3Me), and the *X*-ray crystal structure of the potassium salt ($x = 3$), 2245–54
Formation of molecular chromium(IV) oxide (CrO_2) by photolysis of $Cr(CO)_6$ in O_2-doped argon matrices, 2255–60
Infrared, resonance-Raman, and excitation profile studies of $[Os_2(O_2CCH_2Cl)_4Cl_2]$, $[Os_2(O_2CC_3H_5)_4Cl_2]$, and $[Os_2(O_2CC_3H_7)_4Cl_2]$: assignment of osmium–osmium, osmium–oxygen, and osmium–chlorine stretching vibrations, 2601–6
The infrared spectra of matrix isolated thorium and uranium tetrachlorides. Change of shape with matrix gas, 2759–62
IRIDIUM
Nickel–iridium carbonyl clusters. Synthesis and solid-state structure of the trianion $[Ir_3Ni_6(\mu\text{-}CO)_6(\mu_3\text{-}CO)_2(CO)_9]^{3-}$. The first example of a mixed iridium–nickel carbonyl cluster, 201–6
Reactions of phosphine, arsine, and stibine with carbonylbis(triethylphosphine)iridium(I) halides. Part 2. Reactions in dichloromethane, 477–84
Iridium(III) *cis*-dihydrido complexes with 3,6-bis(2′-pyridyl)pyridazine. Crystal structure of the pyridazinyl complex $[\{IrH_2(PPh_3)_2\}_2\{\mu\text{-}C_4HN_2(C_5H_4N)_2\text{-}3,6\}]PF_6$, 651–6
Kinetic studies of the complexation of oxalate to hexa-aquairidium(III), 711–6
Selective hydrogenation of PhCH=CHCOMe to the unsaturated alcohol catalysed by $[IrH_3(PR_3)_3]$ (R = alkyl or aryl), 947–52
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 71. Synthesis of tungsten– iridium complexes crystal structures of $[W_2Ir(\mu_3\text{-}RC_2R)Cl(CO)_4(\eta\text{-}C_5H_5)_2]\cdot CH_2Cl_2$ and $[W_2Ir(\mu\text{-}CR)(\mu_3\text{-}CR)Cl(CO)_4(\eta\text{-}C_5H_5)_2]$ (R = C_6H_4Me-4), 1131–8
Hydrido platinum metal macrocyclic complexes: the synthesis and single-crystal *X*-ray structure of *cis*-$[IrCl(H)L^1]PF_6$ {L^1 = 7-methyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 1165–8
A kinetic investigation on the oxidation of platinum(II) complexes by hexachloroiridate(IV). Role of steric hindrance, 1577–82
Novel synthetic routes to disulphur and disulphur monoxide ligands: nucleophilic attack at co-ordinated imino-oxo-λ^4-sulphanes, 2027–32
Iron–rhodium and iron–iridium complexes containing one bridging $Ph_2PCH_2PPh_2$ (dppm) ligand: crystal structure of $[(\eta^5\text{-}C_5H_5)Fe(\mu\text{-}CO)_2(\mu\text{-dppm})RhMe_{0.4}Cl_{1.6}]$, 2099–102
Synthesis and chemical characterization of the hexanuclear anions $[Ir_6(CO)_{14}X]^-$ (X = Cl, Br, I, or SCN). Crystal and molecular structures of $[PPh_4][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}Br)]$ and $[N(PPh_3)_2][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}X)]$ (X = I or SCN), 2307–14
Dinuclear complexes of rhodium and iridium with cyanide or thiocyanate bridges: molecular structure of $[(PMe_2Ph)_3Cl_2Ir(\mu\text{-}CN)IrCl_2(PMe_2Ph)_3][ClO_4]$, 2475–82
Co-ordination chemistry of higher oxidation states. Part 27. Synthesis, properties, and electrochemistry of some *cis*-tetrahalogenoiridium(IV) complexes: crystal structure of $[Ir(phen)Cl_4]$, 2483–90
Synthesis and properties of pentachloro(ligand)iridate(IV) anions $[IrLCl_5]^-$ (L = pyridine, PPh_3, $AsPh_3$, $SbPh_3$, SMe_2, SPh_2, or $SeMe_2$), 2677–80
Metallaheteroborane chemistry. Part 4. The synthesis of *closo*-$[2,2\text{-}(PPh_3)_2\text{-}2\text{-}H\text{-}1,2\text{-}XMB_{10}H_{10}]$ (X = Se or Te, M = Rh or Ir) compounds, their characterisation by nuclear magnetic resonance techniques, and the crystal and molecular structure of the X = Te, M = Rh complex, 2739–46
IRON
An investigation of non-stoicheiometry in the systems $SrFeO_{3-y}$ and $SrCoO_{3-y}$ by iron and cobalt *K*-edge extended *X*-ray absorption fine structure spectroscopy, 83–8
Covalent bonding and spin density in *cis*-$[Fe(bipy)_2Cl_2][FeCl_4]$ (bipy = 2,2′-bipyridyl) studied by polarised neutron diffraction, 117–22
Iron–xanthate complexes $[Fe(CO)_2(\eta\text{-}C_5R_5)\{SC(S)OEt\}]$ and $[Fe(CO)(\eta\text{-}C_5R_5)(S_2COEt)]$ (R = H or Me). Synthesis and electrochemistry, 149–54
Study of relative stabilities of the intermediates in catalytic carbon monoxide hydrogenation reactions: *ab initio* calculations on the model compounds $[Fe(CO)_2(PH_3)_2H_2]$, $[Fe(CO)_2(PH_3)_2(CHO)H]$, $[Fe(CO)_2(PH_3)_2(CH_2O)]$, and $[Fe(CO)(PH_3)_2(CHO)_2]$, 249–52
Kinetics of the reaction between hypochlorous acid and hexacyanoferrate(II) ion in aqueous solution, 273–6
An improved route to the synthesis of μ-(alkane- or arene-thiolato)(μ-ethenyl)di-iron complexes. Crystal structure of μ-phenylmethanethiolato-μ-(1,2-diphenylethenyl)-hexacarbonyldi-iron(*Fe–Fe*), 281–4
Iron–formaldehyde interaction: *'ab initio'* calculations on the model

IRON (contd)
compounds $[Fe(CO)_{4-n}(PH_3)_n(\eta^2\text{-}CH_2O)]$ (n = 0, 2, or 4), 321–8
A model for the interpretation of the absorption and circular dichroism spectra of tris(di-imine) complexes of iron(II) and ruthenium(II), 393–400
Mechanistic studies on iron phosphine complexes. Part 1. Protonation and substitution of *trans*-$[FeH(X)(diphosphine)_2]$ (X = Cl or Br, diphosphine = $Et_2PCH_2CH_2PEt_2$ or $Ph_2PCH_2CH_2PPh_2$), 509–14
Mechanistic studies on iron phosphine complexes. Part 2. Protonation and substitution reactions of dinitrogen complexes, 515–20
Preparation and reactions of $[Fe(Ph_2PCH_2PPh_2\text{-}P)(CO)(COMe)(\eta^5\text{-}C_5H_5)]$ and its derivatives, 725–8
Organo–platinum–iron complexes containing one bridging $Ph_2PCH_2PPh_2$ ligand. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CO)Pt(PPh_3)]$, $[(OC)_2Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)C_2H_3\}Pt(PPh_3)]$, and $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CMe{=}CH_2)\text{-}Pt(PPh_3)][BF_4]$, 741–50
An iron-57 and gold-197 Mössbauer spectroscopic investigation of the bonding in two gold–iron cluster compounds, 781–4
Carbon-13 and oxygen-17 nuclear magnetic resonance relaxation studies of $[M_3(CO)_{12}]$ derivatives (M = Fe, Ru, or Os), 791–2
Synthesis, characterization, and electrochemistry of dicyclopentadienylsiloxane-bridged dicarbonyldi-iron, 833–8
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution, 943–6
A reconsideration of the role of slippage in the activation of co-ordinated olefins towards nucleophilic attack, 1037–44
Reactions of the metallacycle $[(OC)(cp)\overline{FeC(SMe)SC(FeL_n)S}]^+$ with nucleophiles. *X*-Ray crystal structures of the complexes $[(OC)(cp)\overline{FeC(NC_5H_{10})SC(FeL_n)S}]SO_3CF_3$ and $[(OC)(cp)\overline{FeC\{(CN)(SMe)\}SC(FeL_n)S}]$ [FeL_n = Fe(cp)(CO)$_2$, cp = η-C_5H_5], 1067–74
A potential iron pharmaceutical composition for the treatment of iron-deficiency anaemia. The crystal and molecular structure of *mer*-tris-(3-hydroxy-2-methyl-4*H*-pyran-4-onato)iron(III), 1159–64
Organo–platinum–iron complexes derived from allenes. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)CH_2C(=CH_2)\}Pt(PPh_3)]$, $[(OC)_3Fe(\mu\text{-}dppm)\{\mu\text{-}C(=CH_2)CH_2\}Pt(PPh_3)]$, and $[(OC)_2Fe(\mu\text{-}dppm)\{\eta^4\text{-}(CH_2)(CMe_2)CPt\text{-}(PPh_3)\}]$, 1185–92
Reorientation of the alkyne moiety in the heterometallic cluster $[FeCo_2(CO)_9(EtC_2Et)]$, induced by phosphine, phosphite, or isonitrile substitution for CO. Crystal structure of $[FeCo_2(CO)_8(PPh_3)(EtC_2Et)]$, 1249–58
Reactions of hexakis(acetonitrile)iron(II) hexafluorophosphate in acetonitrile. Ligation of ammonia, pyridine, and trimethylamine to iron(II) and the behaviour of trimethyl phosphite and trimethylphosphine towards iron(II), nitrogen donor ligand complex cations, 1309–14
Analysis of substituted ferrocenes by infrared spectroscopy, 1383–92
A low-spin iron nitrosyl complex from the reaction of NO with (5*H*,14*H*-6,8,15,17-tetramethyldibenzo[*b*,*i*][1,4,8,11]tetra-azacyclotetradecinato)iron(II), and its crystal structure, 1409–12
Reaction of $[FeCo(CO)_7(\mu\text{-}CH{=}CRH)]$ (R = H or Ph) with dimethylphenylphosphine. Synthesis and structure of $[FeCo(CO)_4(\mu\text{-}CO)(PMe_2Ph)_2(\mu\text{-}CH{=}CH_2)]$, an electronically unbalanced iron–cobalt complex, 1417–20
Crystal structures of *o*-, *m*-, and *p*-nitrophenylferrocenes and their relevance to other sterically crowded phenylferrocenes, 1549–56
Synthesis and reactivity of mixed-ligand isocyanide–diphosphine iron(0) complexes. *X*-Ray crystal structure of *cis*-$[\overline{Fe(dppe)(CNPh)_2\{N(Ph){=}C(Me)\text{-}C{=}NPh\}}]ClO_4$, 1591–8
Allylation of cobalt-co-ordinated cyclo-octatetraene by the $[Fe\{P(OMe)_3\}(NO)_2(\eta^3\text{-allyl})]^+$ cation: ring closure to 1,2,3,3a-tetrahydropentalenyl derivatives and the *X*-ray structure of $[Co(\eta^5\text{-}C_8H_8R)(\eta\text{-}C_5Me_5)][PF_6]$ [R = $CH_2C(Me){=}CH_2$], 1631–6
Synthesis and structural characterisation of some cyclopentadienyliron–bismuth complexes, 1671–8
Reactions of co-ordinated ligands. Part 43. Alkyne linking reactions at dimetal centres. Synthesis and structures of $[Mo_2\{\mu\text{-}(\sigma,\eta^3{:}\eta^2{:}\eta^3,\sigma\text{-}C_8H_4Bu^t_4)\}(\eta\text{-}C_5H_5)_2]$, $[Mo_2\{\mu\text{-}(\sigma,\eta^3{:}\eta^3,\sigma\text{-}CH{=}CHBu^tC_6H_2Bu^t_3)\}(\eta\text{-}C_5H_5)_2]$, and $[FeMo(CO)_2(C_4Me_2Ph_2)(\eta\text{-}C_5H_5)_2]$, 1843–52
Discontinuous high spin $\rightleftharpoons$ low spin transition in an iron(II) complex $[FeL_2(NCS)_2]$ with the pharmaceutical agent bromazepam, 1999–2002
Kinetics of nucleophilic attack on co-ordinated organic moieties. Part 25. A nucleophilic order for attack upon the $[Fe(CO)_3(1\text{–}5\text{-}\eta\text{-}C_7H_9)]^+$ cation, 2009–14
The complexation of iron(III) with sulphate, phosphate, or arsenate ion in sodium nitrate medium at 25 °C, 2015–22
Iron–rhodium and iron–iridium complexes containing one bridging $Ph_2PCH_2PPh_2$ (dppm) ligand: crystal structure determination of $[(\eta^5\text{-}C_5H_5)Fe(\mu\text{-}CO)_2(\mu\text{-dppm})RhMe_{0.4}Cl_{1.6}]$, 2099–102
Anaerobic oxidation of cysteine to cystine by iron(III). Part 2. The reaction in basic solution, 2109–12
Ring expansion in dimetallacycle chemistry: preparation of a dimetallacyclopentanol from a dimetallacyclobutane, 2235–8
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution (**1988**, 943), 2243
Formation and peroxidatic properties of coprohaem Compound I, 2267–72
Kinetics of the decomposition of coprohaem Compound I in aqueous solution, 2273–8
On the reduction of iron–sulphur clusters under carbon monoxide, 2329–34
Kinetics of redox reactions between complexes of molybdenum and iron: the oxidation of iron(II) by molybdenum(VI) and of $[Mo(H_2O)_6]^{3+}$ by $[Fe(H_2O)_6]^{3+}$, 2397–402
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron– molybdenum compounds with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2C(Me)C(Me)\}(CO)_4(\eta\text{-}C_5H_5)]$, $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2\}(CO)_5(\eta\text{-}C_5H_5)]$, and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CH_2PMe_3)CHMe\}(CO)_5(\eta\text{-}C_5H_5)]$, 2431–42
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 78. Reactions of $[MoFe(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_6(\eta\text{-}C_5H_5)]$ with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(O)C(Et)C(Et)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$ and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C[C(O)Me]\}(CO)_5(\eta\text{-}C_5H_5)]$, 2443–52
Photochemical and photocatalytic behaviour of 'flyover-bridge' complexes, 2519–24
Tertiary phosphine complexes of iron porphyrins: synthesis, molecular stereochemistry, and crystal structure of bis(dimethylphenylphosphine)(*meso*-5,10,15,20-tetraphenylporphyrinato)iron(II), 2615–20
Transition-metal carbonyl derivatives of the germanes. Part 17. Tetracarbonylgermyl(trimethylgermyl)iron, $[Fe(CO)_4(GeH_3)(GeMe_3)]$, its conversion into $[\{Fe(CO)_4(GeH_2)\}_2]$, and hence to $[Co_4Fe_2Ge_2(CO)_{21}]$ (characterised by *X*-ray crystallography) *via* $[Co_4Fe_2Ge_2(CO)_{22}]$, 2629–34
Transition-metal carbonyl derivatives of the germanes. Part 18. Tetracarbonylbis(permethylgermyl)iron compounds $[Fe(CO)_4(GeMe_{3-x}H_x)(GeMe_{3-y}H_y)]$ for x,y = 0—3, 2635–44
Synthesis and structures of phosphinidene and phosphido complexes of iron and cobalt, 2713–22
Crystal structure and magnetic properties of the complex $[Cu(en)_2]_2[\{Fe(edta)\}_2O]\cdot 2H_2O$. A heterobimetallic Cu^{II}– Fe^{III} system containing a μ-oxo-di-iron(III) moiety, 2747–52
Proton nuclear magnetic resonance studies on haemin chloride in pyridine–water solution, 2797–802
Studies on olefin-co-ordinating transition metal carbene complexes. Part 12. Novel synthesis and structural characterization of (η^6-arene)dicarbonyliron complexes, and their oxidation products, 2803–8
Mössbauer and preparative studies of some iron(II) complexes of diphosphines, 2865–70
Crystal and molecular structures of four bis(diphosphine) complexes of iron(II): bis[1,2-bis(diethylphosphino)ethane]di-iodoiron(II), dichlorobis[*o*-phenylenebis(diphenylphosphine)]iron(II), bis(acetonitrile)bis[*o*-phenylenebis(diphenylphosphine)]iron(II) di-iodide, and iodobis-[*o*-phenylenebis(diphenylphosphine)]iron(II) iodide, 2871–8
Water-soluble hexadentate Schiff-base ligands as sequestrating agents for iron(III) and gallium(III), 2927–34
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 81. Reactions of the compound $[Fe_2(\mu\text{-}CH_2)(CO)_8]$ with alkylidyne–molybdenum and –tungsten

IRON (contd)
complexes. Reactivity of the product [WFe{μ-σ:η-CH=CH(C_6H_4Me-4)}$(CO)_6$(η-C_5H_5)], and crystal structures of the species [W_2Fe(μ_3-CC_6H_4Me-4){μ-σ:η-C(C_6H_4Me-4)=CH_2}$(CO)_6$(η-C_5H_5)$_2$] and [WFe{μ-C(Et)C(Et)C(H)CH(C_6H_4Me-4)}(μ-CO)$(CO)_4$(η-C_5H_5)], 3017–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron–molybdenum compounds with alkynes; crystal structures of [MoFe{μ-C(C_6H_4Me-4)C(CHMe)CH_2C(Me)C(Me)}$(CO)_4$(η-C_5H_5)], [MoFe{μ-C(C_6H_4Me-4)C(CHMe)CH_2}$(CO)_5$(η-C_5H_5)], and [MoFe{μ-C(C_6H_4Me-4)C(CH_2PMe_3)CHMe}$(CO)_5$(η-C_5H_5)], **(1988, 2431)**, 3063
ISOBENZOFURAN
Reaction between 1,3-diphenylisobenzofuran and a blue oxyhaemocyanin model compound, 2003–4
ISOCYANATE
Electron diffraction study of the molecular structures of monomethylsilyl isocyanate and monomethylsilyl isothiocyanate in the gas phase, 1193–8
ISOCYANIDE
Cyclo-oligomerisation reactions of bis(alkyne) and η^2-vinyl complexes of molybdenum and tungsten with t-butyl isocyanide leading to iminocyclopentadiene derivatives, 27–34
Tetragonal co-ordination polymers of rhodium(I) with stereochemically rigid aryl di-isocyanide linkages, 469–76
Synthesis and structural characterisation of some *triangulo*- and binuclear clusters of platinum from the reaction of [Pt_3(μ-SO_2)$_3${$P(C_6H_{11})_3$}$_3$] with 2,6-xylyl isocyanide, 1509–16
Synthesis and reactivity of mixed-ligand isocyanide–diphosphine iron(0) complexes. *X*-Ray crystal structure of *cis*-[Fe(dppe)(CNPh)$_2${N(Ph)=C(Me)–C=NPh}]ClO_4, 1591–8
Structurally diversified neutral copper(I) isocyanide complexes: mono- and bi-nuclear complexes from the reaction of copper(I) halides with *p*-tolyl isocyanide, 1599–606
Functionalized isocyanides as ligands. Part 5. Syntheses and reactions of 3-(benzylphosphonio)indolin-2-ylidene complexes of platinum(II). *X*-Ray crystal structure of *trans*-[Pt{*o*-CN(H)C_6H_4C[$P(CH_2Ph)_2Ph$]}X$(PPh_3)_2$]BF_4·$2C_2H_4Cl_2$ (X = Cl or Br), 1803–12
The co-ordination of small molecules by manganese(II) phosphine complexes. Part 14. Some novel mixed tertiary phosphine–t-butyl isocyanide complexes of manganese(II): [$MnBr_2$($CNBu^t$)$(PPhMe_2)$] and [Mn$(CNBu^t)_4(PR_3)_2]^{2+}$ (PR_3 = $PPhMe_2$, PPh_2Me, $PPhEt_2$, or PPr^n_3), and the *X*-ray crystal structure of bis(dimethylphenylphosphine)tetrakis(t-butyl isocyanide)manganese(II) bis[tribromo(dimethylphenylphosphine oxide)manganate(II)], [Mn$(CNBu^t)_4$$(PPhMe_2)_2$][$MnBr_3$$(OPPhMe_2)$]$_2$, 2261–6
ISOMERISM
Effect of geometrical isomerism on metal nuclear magnetic resonance chemical shifts in octahedral d^6 transition-metal complexes, 79–82
ISOMERIZATION
Preparation, *X*-ray structural analysis, and method of interconversion of two isomeric forms of [$Os_6$$(CO)_{16}$·{$P(OMe)_3$}$_2$], 1205–12
ISOSERINE
Mixed metal complexes in solution. Part 5. Equilibrium and conformational study of heterobinuclear metal(II) isoserine complexes in aqueous solution, 1267–72
ISOTHIOCYANATE
Electron diffraction study of the molecular structures of monomethylsilyl isocyanate and monomethylsilyl isothiocyanate in the gas phase, 1193–8
KETONE
Complexes of functional phosphines. Part 11. β-Ketophosphine complexes of nickel, palladium, and platinum. Crystal structures of *trans*-[$NiX_2$$(HL)_2$] [X = Cl or I, HL = $Ph_2PCH_2C(O)Ph$], 353–62
KINETICS
The pH and temperature dependent hydrolyses of [*N*,*N*-bis(2-aminoethyl)-1,2-ethanediamine]bis(solvent)cobalt(III) and bis(dimethylformamide)(1,4,7,10-tetra-azacyclododecane)cobalt(III) complexes, 47–52
Kinetics of the reaction between hypochlorous acid and hexacyanoferrate(II) ion in aqueous solution, 273–6
Mechanistic studies on iron phosphine complexes. Part 1. Protonation and substitution of *trans*-[$FeH(X)$(diphosphine)$_2$] (X = Cl or Br, diphosphine = $Et_2PCH_2CH_2PEt_2$ or $Ph_2PCH_2CH_2PPh_2$), 509–14
Mechanistic studies on iron phosphine complexes. Part 2. Protonation and substitution reactions of dinitrogen complexes, 515–20
Kinetics of oxidation of uranium(IV) by permanganate ion in aqueous perchlorate media, 601–4
Kinetics and mechanism of oxidation of β-phenylalanine by permanganate ion in aqueous perchloric acid, 605–10
Kinetic studies of the complexation of oxalate to hexa-aquairidium(III), 711–6
Oxidation of ascorbic acid by copper(II) and the ferrocenium ion in acetonitrile–water mixtures, 733–40
Kinetics and mechanisms of the reactions of nickel(II) with 4,4,4-trifluoro-1-(2-thienyl)butane-1,3-dione in aqueous solution, 905–8
Trifluoromethanesulphonato-*O* complexes of platinum(II) and palladium(II), 931–4
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution, 943–6
Acid- and base-catalysed displacement of the carboxylate ligand from [Pt(dien)(RCO_2)]$^+$ (dien = 1,5-diamino-3-azapentane; R = CH_2Cl, $CHCl_2$, or CCl_3) in aqueous solution, 1049–52
Kinetics of the oxidation of hydrogen azide (hydrazoic acid) by bis(2,2′-bipyridine)manganese(III) ions in aqueous perchlorate media, 1331–6
Mechanism of reactions of some N^1-substituted biguanides with chromium(VI) in aqueous sulphuric acid media, 1557–60
A kinetic investigation on the oxidation of platinum(II) complexes by hexachloroiridate(IV). Role of steric hindrance, 1577–82
Significant phosphine ligand effect on the photochemical reactivity of [Cu(N–N)L_2]$^+$ (N–N = 1,10-phenanthroline or 2,9-dimethyl-1,10-phenanthroline; L = tertiary phosphine), 1641–4
Equilibria and kinetics of dissociation of triphenylphosphine from [*N*,*N*′-ethylenebis(salicylideneiminato)]bis(triphenyl-phosphine)ruthenium(II) in benzene, 2007–8
Kinetics of nucleophilic attack on co-ordinated organic moieties. Part 25. A nucleophilic order for attack upon the [Fe$(CO)_3$(1—5-η-C_7H_9)]$^+$ cation, 2009–14
Anaerobic oxidation of cysteine to cystine by iron(III). Part 2. The reaction in basic solution, 2109–12
Kinetics of the displacement of cyclobutane-1,1-dicarboxylate from diammine(cyclobutane-1,1-dicarboxylato)-platinum(II) in aqueous solution, 2135–40
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion [Mo_3(μ_3-S)(μ-O)(μ-$S)_2$$(H_2O)_9$]$^{4+}$, 2239–40
Anaerobic oxidation of cysteine to cystine by iron(III). Part 1. The reaction in acidic solution **(1988, 943)**, 2243
Formation and peroxidatic properties of coprohaem Compound I, 2267–72
Kinetics of the decomposition of coprohaem Compound I in aqueous solution, 2273–8
Kinetic studies of the reduction of nickel oxime complexes by tris(1,10-phenanthroline)cobalt(II) and hydroquinone in aqueous media, 2279–86
Nucleophilic discrimination and the *trans* effect. The kinetics of displacement of X from *trans*-[Pt(L)(X)Cl_2]$^{n-}$ (L = Me_2SO, Et_2S, PMe_3, PEt_3, PPh_3, or $AsEt_3$; X = Cl, *n* = 1; X = MeOH, *n* = 0) by neutral and anionic nucleophiles, 2347–52
Sulfur–nitrogen bonded metal chelates. Part 17. Reactions of alcohols with the co-ordinated nitrile in nickel(II) complexes [NiL(NCR)][ClO_4] (L = a *S*,*N*,*N*-tridentate anion; R = Me, Et, or Ph) under different conditions, 2373–8
Kinetics of redox reactions between complexes of molybdenum and iron: the oxidation of iron(II) by molybdenum(VI) and of [$Mo(H_2O)_6$]$^{3+}$ by [$Fe(H_2O)_6$]$^{3+}$, 2397–402
Thermodynamic and kinetic studies on the complexation reactions of copper(II) with *NN*′-bis(β-carbamoylethyl)-*trans*-cyclohexane-1,2-diamine, 2495–500
Preparation and redox properties of the cuboidal molybdenum(III) aqua ion [$Mo_4S_4$$(H_2O)_{12}$]$^{4+}$, 2579–84
Co-ordination kinetics of some aliphatic amines towards the photogenerated transient 'CoH{$PPh(OEt)_2$}$_3$', 2675–6
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion [Mo_3(μ_3-S)(μ-O)(μ-$S)_2$$(H_2O)_9$]$^{4+}$ **(1988, 2239)**, 2683

KINETICS (contd)
Preparation, characterisation, and intramolecular electron-transfer studies on the penta-ammineruthenium histidine-modified high-potential iron–sulphur protein from *Chromatium vinosum*, 2843–50
Water-soluble hexadentate Schiff-base ligands as sequestrating agents for iron(III) and gallium(III), 2927–34
LANTHANIDE
Analysis of multinuclear lanthanide induced shifts. Part 5. The co-ordination polyhedron of 1:3 lanthanide(III)–glycolate complexes in aqueous solution, 717–24
Analysis of multinuclear lanthanide induced shifts. Part 6. Structures of lanthanide(III) tris(oxydiacetate) complexes in aqueous solution, 961–6
Crystal growth, structure, and properties of $KLa(CrO_4)_2$, 1911–4
Diphenylphosphido complexes of the lanthanides: reactions of compounds $[Ln\{N(SiMe_3)_2\}_3]$ (Ln = La or Eu) or $[Ln\{N(SiMe_3)_2\}_3(Ph_3PO)]$ (Ln = La, Eu, or Y) with Ph_2PH to give $[Ln\{N(SiMe_3)_2\}_2(PPh_2)]$ or $[Ln\{N(SiMe_3)_2\}_2(PPh_2)(Ph_3PO)]$, 2211–4
Temperature study of the solution conformations of aqueous lanthanide(III) complexes containing monodentate ligands, 2315–22
Lanthanide(III)-catalysed addition of glycolate to maleate. Investigation of intermediates using multinuclear magnetic resonance spectroscopy, 2723–8
LANTHANUM
Complexes of ligands providing endogenous bridges. Part 5. Solution studies on a novel '3 + 3' hexamine Schiff-base macrocyclic complex of lanthanum, 685–90
Crystal growth, structure, and properties of $KLa(CrO_4)_2$, 1911–4
LEAD
A new approach to measurement of the donor strength and co-ordination chemistry of various solvents by oxidation of metal amalgam electrodes in dichloromethane, 2379–84
LIGAND FIELD
Ligand-field analysis of the ion VO^{2+}: application of the angular overlap model to the electronic absorption spectrum of bis(acetylacetonato)oxovanadium(IV) in various solvents, 1665–70
Ligand-field traces in three- and five-co-ordinated transition-metal(III) complexes, 2201–10
LITHIATION
Axially asymmetric metal alkyls. Part 6. Lithiation of 2,2′-dimethyl-1,1′-binaphthyl and its trimethylsilylated compounds, and of 2,2′,6,6′-tetramethyl-1,1′-biphenyl (asymmetric induction): *X*-ray crystal structures of monomeric $[\{Li(Me_2NCH_2CH_2NMe_2)\}_2\{2\text{-}CH_2C_{10}H_6)_2\}]$ and $[Li\{(Me_2NCH_2CH_2)_2NMe\}\{2\text{-}CH_2\text{-}6\text{-}Me(C_6H_3)_2\text{-}2',6'\text{-}Me_2\}]$, 2403–10
LITHIUM
Some sterically hindered lithium alkylbromo- and alkylchloro-magnesates, -cadmates, and -manganates. Crystal and molecular structures of $[Li(thf)_2(\mu\text{-}Br)_2Mg\{C(SiMe_3)_3\}(thf)]$, $[Li(thf)_4][\{Cd[SiMe_3)_3]\}_3(\mu\text{-}Br)_3(\mu_3\text{-}Br)]\cdot 0.5C_6H_{12}$, $[\{Li(thf)\}_3(\mu_3\text{-}Br)_3(\mu_3\text{-}OSiMe_3)Cd\{C(SiMe_3)_3\}]$, and $[Li(thf)_4][\{Mn[C(SiMe_3)_3]\}_3(\mu\text{-}Cl)_4(thf)]$ (thf = tetrahydrofuran), 381–92
Syntheses and solid-state structures of trimeric dibenzylamidolithium and its diethyl ether and hexamethylphosphoramide dimeric complexes: an explanation of these structures and evidence for Li · · · CH interactions in both solid and solution phases, 617–28
Lewis-base adducts of main Group 1 metal compounds. Part 2. Syntheses and structures of $[Li_4Cl_4(pmdien)_3]$ and [LiI(pmdien)], 987–90
Lewis-base adducts of main Group 1 metal compounds. Part 3. Synthesis and structural systematics of $[LiXL_3]$ and $[L'_2LiX_2LiL'_2]$ systems (X = Cl, Br, or I; L = 3,5-$Me_2C_5H_3N$, L′ = 2-MeC_5H_4N), 991–6
Synthesis and structural studies of [2-(6-methyl)pyridyl]- and (8-quinolyl)-trimethylsilylamido-lithium complexes, 1011–20
Axially asymmetric metal alkyls. Part 6. Lithiation of 2,2′-dimethyl-1,1′-binaphthyl and its trimethylsilylated compounds, and of 2,2′,6,6′-tetramethyl-1,1′-biphenyl (asymmetric induction): *X*-ray crystal structures of monomeric $[\{Li(Me_2NCH_2CH_2NMe_2)\}_2\{2\text{-}CH_2C_{10}H_6)_2\}]$ and $[Li\{(Me_2NCH_2CH_2)_2NMe\}\{2\text{-}CH_2\text{-}6\text{-}Me(C_6H_3)_2\text{-}2',6'\text{-}Me_2\}]$, 2403–10
MACROCYCLE
f-Element–crown ether complexes. Part 9. The role of solvent hydrogen bonding: synthesis and crystal structure of aquatetrachlorotris(ethanol)thorium(IV)–1,4,7,10,13,16-hexaoxacyclo-octadecane–water (1/1/1), 13–6
Crown thioether chemistry. Synthesis and structural investigation of 1,5,9-trithiacyclododecane (trithia-12-crown-3) and its copper(II) chloride adduct, 93–6
Studies on ruthenium(II) macrocyclic amine complexes. Synthesis and *X*-ray structure of the (*R*,*S*,*R*,*R*) isomer of *trans*-$[Ru^{II}(L)(N_3)(NCMe)]PF_6$ (L = 1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecane), 239–42
Dicopper(I) complexes containing intramolecular 1,2-diaza bridging ligands. Behaviour of the dicopper site in the dehydrogenation of hydrazobenzene. Crystal structure of $[Cu_2L^2(pydz)_2][ClO_4]_2$, 347–52
Synthesis and characterization of metal-free and metal derivatives of a novel soluble crown-ether-containing phthalocyanine, 401–6
Synthesis of a thirteen-membered tetra-azamacrocycle employing formaldehyde and nitroalkanes directed by metal ions. Crystal structures of (12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)copper(II) perchlorate and μ-chloro-1,1,1-trichloro-2-(12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)dicopper(II), 497–502
Octabutoxyphthalocyanine, a new electron donor, 549–52
Complexes of ligands providing endogenous bridges. Part 5. Solution studies on a novel '3 + 3' hexamine Schiff-base macrocyclic complex of lanthanum, 685–90
Binucleating N_6 24- and 26-membered macrocyclic ligands. Part 2. Transition-metal homo- and hetero-binuclear complexes: *X*-ray crystallographic structure determination of a lead–manganese heterobinuclear complex, 1001–10
Studies of pendant arm macrocyclic ligands. Part 6. Synthesis of two penta-aza macrocyclic ligands containing single pendant co-ordinating 2-pyridylmethyl and 1-pyrazolylmethyl arms, and characterisation of their nickel(II), copper(II), cobalt(II), and zinc(II) complexes. Crystal structure of {3,11-dibenzyl-7-(2′-pyridylmethyl)-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}zinc(II) perchlorate, 1089–94
Synthesis and electrode reactions of difluorogermanium(IV) porphyrins. Molecular stereochemistry and crystal structure of difluoro(2,3,7,8,12,13,17,18-octaethylporphyrinato)germanium(IV), 1109–14
Hydrido platinum metal macrocyclic complexes: the synthesis and single-crystal *X*-ray structure of *cis*-$[IrCl(H)L^1]PF_6$ {L^1 = 7-methyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 1165–8
Polynuclear manganese(II) complexes with Robson-type ligands. Synthesis, characterization, molecular structure, and magnetic properties, 1225–36
Some observations on the mechanism of passive transport, 1293–6
cis- and *trans*-Dichloro chelate complexes of niobium(IV): synthesis and structure of *trans*-dichloro[*NN*′-ethylenebis(acetylacetonylideneiminato)(2−)]niobium(IV) and *cis*-dichloro{7,16-dihydro-6,8,15,17-tetramethyldibenzo[*b*,*i*]-[1,4,8,11]tetra-azacyclotetradecinato(2−)}niobium(IV)–acetonitrile (1/2), 1361–6
Synthesis, magnetic properties, redox behaviour, and crystal structure of the bridged binuclear nickel(II) complex $[Ni_2(\mu\text{-}OH)(\mu\text{-}CH_3CO_2)_2L_2]ClO_4\cdot H_2O$, 1367–70
A low-spin iron nitrosyl complex from the reaction of NO with (5*H*,14*H*,-6,8,15,17-tetramethyldibenzo[*b*,*i*][1,4,8,11]tetra-azacyclotetradecinato)iron(II), and its crystal structure, 1409–12
Synthesis and single-crystal *X*-ray structure determination of *trans*-$[RhCl_2(tmc)]PF_6$ (tmc = 1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecane), 1561–4
Association and orientation of copper(II) tetra-t-butylphthalocyaninate in multilayer Langmuir–Blodgett films as determined by electron paramagnetic resonance spectroscopy, 1583–90
Effects of sodium ions on the molecular dynamics of bis(aza-15-crown-5)thiuram disulphide, 1697–700
Studies involving mixed-donor macrocyclic ligands. A comparative study of the influence of medium effects on the stabilities of complexes of Co^{II}, Ni^{II}, and Cu^{II} with 14- to 16-membered O_2N_2-donor macrocycles, 1733–6
Homoleptic hexathia complexes of rhodium. The synthesis, electrochemistry, and single-crystal *X*-ray structure of $[RhL_2][PF_6]_3$ (L = 1,4,7-trithiacyclononane), 1861–6
Synthesis and characterization of diazido–germanium(IV) and -tin(IV) porphyrins. Crystal structure of diazido(5,10,15,20-tetra-

MACROCYCLE (contd)
p-tolylporphyrinato)germanium(IV), 1921–6
Axial co-ordination and ion-pair formation for *R,S,R,S*-1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecanenickel(II) perchlorate in various mixed solvents with nitrobenzene, 1935–42
Comparisons of thirteen- to sixteen-membered tetra-azacycloalkane copper(II) complexes derived from template syntheses involving nitroethane and formaldehyde. Crystal structures of (10-methyl-10-nitro-1,4,8,12-tetra-azacyclopentadecane)copper(II) and (3-methyl-3-nitro-1,5,9,13-tetra-azacyclohexadecane)copper(II) perchlorates, 2145–52
Electrochemical studies of nickel(II) and cobalt(II) complexes of tetra-azamacrocycles bearing a pyridine functional group and *X*-ray structures of $[Ni^{II}(L^3)Cl]ClO_4$ and $[Ni^{II}(L^3)][ClO_4]_2 \cdot H_2O$ {L^3 = *meso*-2,3,7,11,12-pentamethyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 2153–60
Formation and peroxidatic properties of coprohaem Compound I, 2267–72
Kinetics of the decomposition of coprohaem Compound I in aqueous solution, 2273–8
Template reactions of 1,4-bis(α-carboxybenzylidenehydrazino)phthalazine with cobalt(II), nickel(II), and chromium(III), 2293–6
The triphenylphosphine adduct of a copper(I) complex involving an incompletely bound N_2S_2 macrocyclic ligand, 2301–6
Synthesis and characterization of bis(phenyltetrazolato)-germanium(IV) and -tin(IV) porphyrins, 2569–72
Structure and dynamic behaviour of palladium(II) complexes formed from *trans*-N_2S_2 macrocyclic ligands and the crystal structure of $[PdL^1][PF_6]_2$ (L^1 = 7,8,17,18-tetrahydro-6*H*,16*H*-dibenzo[*g*,*o*][1,9,5,13]-dithiadiazacyclohexadecine), 2573–8
Tertiary phosphine complexes of iron porphyrins: synthesis, molecular stereochemistry, and crystal structure of bis(dimethylphenylphosphine)(*meso*-5,10,15,20-tetraphenylporphyrinato)iron(II), 2615–20
Rhenium complexes of tetra-aza macrocycles: the synthesis and single-crystal *X*-ray structure of *trans*-$[Re(O)_2(cyclam)]Cl \cdot 2(BPh_3 \cdot H_2O)$, 2645–8
Intermolecular dimerisation of copper porphyrins and their radical cations. An electron spin resonance study, 2681–2
Redox reactions of osmium porphyrins, 2705–12
Uncommon complex stoicheiometry in solvent extraction: solution-phase dicationic complex formation of crown ethers, 2735–8
The preparation of 5,7,7,12,14-pentamethyl-1,4,8,11-tetra-azacyclotetradeca-4,11-diene and its complexes with copper(II), nickel(II), zinc(II), and cobalt(III), 2763–8
Proton nuclear magnetic resonance studies on haemin chloride in pyridine–water solution, 2797–802
Synthesis and characterization of a crown-ether substituted salicylaldimine Schiff-base ligand and its complexes with cobalt(II), copper(II), nickel(II), and uranyl(VI), 2831–6
Co-ordination chemistry of ruthenium with chelating amine ligands: synthesis and *X*-ray structural study of the N_6-co-ordinated ruthenium(II) complex of 1,4,8,11-tetrakis(2-pyridylmethyl)-1,4,8,11-tetra-azacyclotetradecane, 2879–84
Synthesis and co-ordination chemistry of two penta-azamacrocycles containing a 1,4-piperazine backbone. Crystal structure determinations of 6,12-dioxo-1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-triene and 1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-trienenickel(II) perchlorate, 2959–64
Dicopper(II) complexes of a binucleating N_4 macrocycle containing mono- and di-atomic bridges; magnetic interactions mediated by alkoxo- and diaza-bridging ligands. Crystal structures of $[Cu_2(L^1)(pz)_2][ClO_4]_2$, $[Cu_2(L^1)(OEt)_2(NCS)_2]$, and $[Cu_2(L^1)(OMe)_2(MeCN)_2][BPh_4]_2$, 2995–3004

MAGNESIUM
X-Ray crystal structure identification of the ternary complex $MgCl_2 \cdot 2SbCl_3 \cdot 6MeCN$, 215–8
Some sterically hindered lithium alkylbromo- and alkylchloro-magnesates, -cadmates, and -manganates. Crystal and molecular structures of $[Li(thf)_2(\mu\text{-}Br)_2Mg\{C(SiMe_3)_3\}(thf)]$, $[Li(thf)_4][\{Cd[SiMe_3)_3]\}_3(\mu\text{-}Br)_3(\mu_3\text{-}Br)] \cdot 0.5C_6H_{12}$, $[\{Li(thf)\}_3(\mu_3\text{-}Br)_3(\mu_3\text{-}OSiMe_3)Cd\{C(SiMe_3)_3\}]$, and $[Li(thf)_4][\{Mn[C(SiMe_3)_3]\}_3(\mu\text{-}Cl)_4(thf)]$ (thf = tetrahydrofuran), 381–92
Five-co-ordinate magnesium complexes: synthesis and structure of quadridentate Schiff-base derivatives, 2341–6
Metal–phenoxyalkanoic acid interactions. Part 28. Crystal and molecular structures of the sodium, ammonium, and magnesium complexes of (*o*-phenylenedioxy)diacetic acid, 2357–62

MAGNETISM
Low-spin six-co-ordinate cobalt(II) complexes. A solution study of tris(violurato)cobaltate(II) ions, 101–4
The crystal structures, magnetic and electrical properties of two polymeric chlorocuprate(II) compounds, 265–72
Synthesis, structure, and spectroscopic and magnetic properties of *catena*-μ-aqua-diaquabis(2,6-dimethoxybenzoato)metal(II) monohydrate complexes of manganese, cobalt, nickel, and zinc. *X*-Ray crystal structure of $[Co(dmba)_2(H_2O)_3] \cdot H_2O$, 363–8
A novel co-ordination mode for the squarate ligand [dihydroxycyclobutenedionate(2−)]: synthesis, crystal structure, and magnetic properties of *catena*-diaqua(2,2′-bipyridyl)-μ-(squarato-O^1,O^2)-nickel(II) dihydrate, 587–90
Synthesis, spectroscopic, magnetic and electrochemical properties of diruthenium-(II,III) and -(III,III) complexes containing the mixed-carboxylato ligand systems $CH_3CO_2^-$–$CF_3CO_2^-$ and $C_6H_5CO_2^-$–$CF_3CO_2^-$, 661–8
Synthesis, characterization, and *X*-ray crystal structures of mononuclear copper(II) complexes with unsymmetrical quadridentate ligands involving an imidazole moiety and discrete imidazolate-bridged binuclear copper(II) complexes with non-identical co-ordination geometries in the binuclear unit, 1021–36
Polynuclear manganese(II) complexes with Robson-type ligands. Synthesis, characterization, molecular structure, and magnetic properties, 1225–36
Synthesis, magnetic properties, redox behaviour, and crystal structure of the bridged binuclear nickel(II) complex $[Ni_2(\mu\text{-}OH)(\mu\text{-}CH_3CO_2)_2L_2]ClO_4 \cdot H_2O$, 1367–70
Crystal structure of $NH_4[Ni\{S_2C_2(CN)_2\}_2] \cdot H_2O$, the first equidistant stack d^7 monoanion metal dithiolene complex, 1689–92
Binuclear nickel(II) and copper(II) complexes containing an endogenous alkanethiolato-bridging sulphur atom and exogenous μ-pyrazolate (pz) group. Crystal structure of $[Ni_2L(pz)]$ [L = *NN*′-3-mercaptopentane-1,5-diylbis(salicylideneiminate)(3−)], 1823–6
Synthesis and *X*-ray crystal structures of an imidazolate-bridged polynuclear copper(II) complex exhibiting a unique helicoid structure and its precursor mononuclear complex, 1943–8
Discontinuous high spin ⇌ low spin transition in an iron(II) complex $[FeL_2(NCS)_2]$ with the pharmaceutical agent bromazepam, 1999–2002
An electron spin resonance and optical study of the behaviour of $Cs_2[TcNCl_5]$ in hydrochloric acid solutions, 2585–90
Crystal structure and magnetic properties of the complex $[Cu(en)_2]_2[\{Fe(edta)\}_2O] \cdot 2H_2O$. A heterobimetallic Cu^{II}–Fe^{III} system containing a μ-oxo-di-iron(III) moiety, 2747–52
Proton nuclear magnetic resonance studies on haemin chloride in pyridine–water solution, 2797–802
Complexes of ligands providing endogenous bridges. Part 6. The *X*-ray crystal structure and magnetic properties of a hexanuclear copper(II) aggregate bearing μ_3-$Cu_3(OH)$ cores supported by 4-nitro-2,6-bis[(salicylideneamino)methyl]-phenolate ligands, 2817–24
Dicopper(II) complexes of a binucleating N_4 macrocycle containing mono- and di-atomic bridges; magnetic interactions mediated by alkoxo- and diaza-bridging ligands. Crystal structures of $[Cu_2(L^1)(pz)_2][ClO_4]_2$, $[Cu_2(L^1)(OEt)_2(NCS)_2]$, and $[Cu_2(L^1)(OMe)_2(MeCN)_2][BPh_4]_2$, 2995–3004
Crystal structures and magnetic properties of the mono-μ-halogeno-bridged copper(II) chains Cu(pcpci)X [pcpci = *N*-(2′-pyridylcarbonyl)pyridine-2-carboximidate, X = Cl or Br], 3041–6

MAIN GROUP
Reactions of some main group metals with diphenyl disulphide and diphenyl diselenide, 1045–8

MALEATE
A single-crystal electron spin resonance study of manganese(II)-doped zinc maleate tetrahydrate, 983–6
Lanthanide(III)-catalysed addition of glycolate to maleate.

MALEATE (contd)
Investigation of intermediates using multinuclear magnetic resonance spectroscopy, 2723–8
MALEONITRILEDITHIOLATE
Synthesis, crystal and molecular structure of tetraphenylarsonium bis(maleonitriledithiolato)tellurate(II), $[AsPh_4]_2[Te(mnt)_2]$, and single-crystal electron spin resonance spectra of the system $[AsPh_4]_2[Cu/Te(mnt)_2]$, 97–100
MALONIC ACID
Complex equilibria in aqueous solutions of Ti^{3+}–glycine and –malonic acid, 2231–4
MANGANESE
Some sterically hindered lithium alkylbromo- and alkylchloromagnesates, -cadmates, and -manganates. Crystal and molecular structures of $[Li(thf)_2(\mu\text{-}Br)_2Mg\{C(SiMe_3)_3\}(thf)]$, $[Li(thf)_4][\{Cd[SiMe_3)_3]\}_3(\mu\text{-}Br)_3(\mu_3\text{-}Br)]\cdot 0.5C_6H_{12}$, $[\{Li(thf)\}_3(\mu_3\text{-}Br)_3(\mu_3\text{-}OSiMe_3)Cd\{C(SiMe_3)_3\}]$, and $[Li(thf)_4][\{Mn[C(SiMe_3)_3]\}_3(\mu\text{-}Cl)_4(thf)]$ (thf = tetrahydrofuran), 381–92
Kinetics of oxidation of uranium(IV) by permanganate ion in aqueous perchlorate media, 601–4
Kinetics and mechanism of oxidation of β-phenylalanine by permanganate ion in aqueous perchloric acid, 605–10
Manganese(IV) and manganese(V) complexes with *N*-(2-hydroxyphenyl)salicylamides, 641–6
A single-crystal electron spin resonance study of manganese(II)-doped zinc maleate tetrahydrate, 983–6
Reaction of manganese(II) arsine oxide complexes with sulphur dioxide: some unexpected products. The *X*-ray crystal structure of $[(Ph_3AsO)_2H]I_3$, 1095–8
Polynuclear manganese(II) complexes with Robson-type ligands. Synthesis, characterization, molecular structure, and magnetic properties, 1225–36
Kinetics of the oxidation of hydrogen azide (hydrazoic acid) by bis(2,2′-bipyridine)manganese(III) ions in aqueous perchlorate media, 1331–6
The oxidative isomerisation of *cis,cis*-dicarbonylmanganese(I) derivatives; isolation of the resulting *trans*-dicarbonylmanganese(II) complexes and the *X*-ray structure of *cis,cis*-$[MnBr(CO)_2\{P(OPh)_3\}(Ph_2PCH_2PPh_2)]$, 1623–30
Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of $[(\eta^5\text{-}C_5H_5)(OC)_2Mo\{\mu\text{-}Ag(PPh_3)\}(\mu\text{-}PPh_2)Mn(CO)_4]$ and $[(\eta\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}I)(\mu\text{-}PPh_2)Mn(CO)_4]$, 1683–8
The co-ordination of small molecules by manganese(II) phosphine complexes. Part 11. The co-ordination of dioxygen by manganese(II) complexes containing long-chain phosphine ligands, 2065–70
Transition metal complexes of substituted 2,2′-biquinolines. Part 1. The crystal and molecular structures of [8,8′-bis(aminomethyl)-2,2′-biquinoline]dichloromanganese(II) and [8,8′-bis(aminomethyl)-2,2′-biquinoline]chlorocopper(II) chloride, 2121–6
The co-ordination of small molecules by manganese(II) phosphine complexes. Part 14. Some novel mixed tertiary phosphine–t-butyl isocyanide complexes of manganese(II): $[MnBr_2(CNBu^t)(PPhMe_2)]$ and $[Mn(CNBu^t)_4(PR_3)_2]^{2+}$ (PR_3 = $PPhMe_2$, PPh_2Me, $PPhEt_2$, or PPr^n_3), and the *X*-ray crystal structure of bis(dimethylphenylphosphine)tetrakis(t-butyl isocyanide)manganese(II) bis[tribromo(dimethylphenylphosphine oxide)manganate(II)], $[Mn(CNBu^t)_4(PPhMe_2)_2][MnBr_3(OPPhMe_2)]_2$, 2261–6
Electron spin resonance studies of organometallic manganese(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 2695–700
Synthesis and reactivity of *N,N*-dialkylcarbamato complexes of manganese(II). Crystal and molecular structure of $[Mn_6(O_2CNEt_2)_{12}]$, a hexamer with four five-co-ordinated manganese(II) atoms, 2921–6
Dinuclear allyl and μ-vinyl complexes from the reactions of a μ-hydrido dimanganese and a μ-hydrido manganese– molybdenum complex with alkynes containing α-methyl or α-methylene substituents, 2953–8
MASS SPECTROMETRY
Ionization energies and thermal fragmentation patterns of gaseous cyclopoly-arsanes and -phosphanes E_nR_n (E = As or P; R = Me, Bu^t, or CF_3; n = 3—5): a joint temperature-variable field ionization mass spectrometric and ultraviolet photoelectron spectroscopic study, 195–200
Matrix isolation and mass spectrometric studies on the vaporisation of OsO_2F_3: characterisation of molecular OsO_2F_3, 997–1000
Caesium tetrathiotungstate(VI). Matrix isolation and mass spectrometric studies of a ternary sulphide which is stable in the vapour, 2047–50
Stepwise ligand dissociation and multiple changes in oxidation state in the fast atom bombardment mass spectra of cyanometalate complexes of transition metals, 2905–12
MATRIX ISOLATION
Spectroscopic studies on matrix isolated osmium pentafluoride oxide, osmium tetrafluoride oxide, and osmium difluoride trioxide, 61–6
Production of binary oxides by photolysis of $M(CO)_6$ molecules (M = Cr, Mo, or W) isolated in O_2-doped argon matrices, 809–18
Matrix isolation and mass spectrometric studies on the vaporisation of OsO_2F_3: characterisation of molecular OsO_2F_3, 997–1000
Spectroscopic sudies on the hexafluorides of rhenium, osmium, iridium, and platinum isolated in low-temperature matrices, 1341–6
The photochemistry of cyclopentadienyl platinum carbonyl dimers: characterization of $[Pt_2(\mu\text{-}CO)(\eta^5\text{-}C_5R_5)_2]$ (R = H or Me) using matrix isolation and fast time-resolved infrared spectroscopy, 1501–8
The characterisation of molecular boric acid by mass spectrometry and matrix isolation infrared spectroscopy, 1645–52
Caesium tetrathiotungstate(VI). Matrix isolation and mass spectrometric studies of a ternary sulphide which is stable in the vapour, 2047–50
Formation of molecular chromium(IV) oxide (CrO_2) by photolysis of $Cr(CO)_6$ in O_2-doped argon matrices, 2255–60
The infrared spectra of matrix isolated thorium and uranium tetrachlorides. Change of shape with matrix gas, 2759–62
MECHANISM
The pH and temperature dependent hydrolyses of [*N,N*-bis(2-aminoethyl)-1,2-ethanediamine]bis(solvent)cobalt(III) and bis(dimethylformamide)(1,4,7,10-tetra-azacyclododecane)cobalt(III) complexes, 47–52
Mechanistic studies on iron phosphine complexes. Part 1. Protonation and substitution of *trans*-$[FeH(X)(diphosphine)_2]$ (X = Cl or Br, diphosphine = $Et_2PCH_2CH_2PEt_2$ or $Ph_2PCH_2CH_2PPh_2$), 509–14
Mechanistic studies on iron phosphine complexes. Part 2. Protonation and substitution reactions of dinitrogen complexes, 515–20
Mechanism of the reaction of $[Mo(\eta\text{-}C_6H_6)(Me_2PCH_2CH_2PMe_2)(\eta\text{-}C_2H_4)H]^+$ with PMe_3 giving $[Mo(\eta\text{-}C_6H_5Et)(dmpe)(PMe_3)H]^+$: metal-to-ring migration of an ethyl group, 557–78
Reactivity and mechanism in the oxidative addition of iodoalkanes and di-iodoalkanes to a dimethylplatinum(II) complex, 595–600
Kinetics and mechanisms of the reactions of nickel(II) with 4,4,4-trifluoro-1-(2-thienyl)butane-1,3-dione in aqueous solution, 905–8
Mechanism of reactions of some N^1-substituted biguanides with chromium(VI) in aqueous sulphuric acid media, 1557–60
Synthesis and oxidation reactions of mono- and di-nuclear rhodium carbonyl complexes of (*o*-diphenylphosphino-phenyl)amine, H_2L; *X*-ray structure analysis of a rhodium(II) amido-bridged dimer, $[\{Rh(\mu\text{-}HL)(CO)Cl\}_2]\cdot EtOH$, 2287–92
MELT
Molten acetamide–potassium thiocyanate eutectic: spectroscopy of first-row transition metal compounds in a room temperature melt, 2701–4
MERCURY
Crystal and molecular structure of bis(2-amino-5-methyl-1,3,4-thiadiazole-N^3)dibromomercury(II). A spectroscopic study and INDO calculations, 1075–8
Synthesis and *X*-ray crystal structure of a weak molecular adduct of diphenylmercury(II) with 1,2-bis(diphenylphosphino-thioyl)ethane, 1401–4
Synthesis and characterization of pentagonal-bipyramidal mercury(II) complexes with 2,6-diacetylpyridine bis(2′-pyridylhydrazone). *X*-Ray structure of [2,6-diacetylpyridine

MERCURY (contd)
bis(2′-pyridylhydrazone)]mercury(II) tetrachloro-mercurate(II), 1479–86
Heterocyclic *N*-oxide ligands: a thermochemical study of adducts with zinc, cadmium, and mercury chlorides, 2113–6
X-Ray crystal and molecular structure of phenyl(triphenylphosphine)mercury(II) nitrate, 2913–4
Crystal structure and spectroscopic properties of mercury(II) halide complexes. Part 4. Crystal and molecular structure and circular dichroism spectra of the chiral 1:1 adduct $(S)_4(S)_6(-)_{589}$-methyl 2-phenylbutyl thioether-mercury(II) chloride, 2915–20
Synthesis of cyclometallated naphthylpalladium complexes *via* transmetallation reactions of naphthylmercury with palladium species. Crystal structure determination of $[\{Pd(mxn)(O_2CMe)\}]$, 2975–82
METALLABORANE
Organoruthenaborane chemistry. Part 6. The reaction of $[\{Ru(\eta^6\text{-}C_6Me_6)Cl_2\}_2]$ with the *closo*-$[B_{10}H_{10}]^{2-}$ anion: characterisation of some *closo*-type eleven-vertex 1-ruthenaundecaboranes and the molecular structure of $[5\text{-}(\eta^6\text{-}C_6Me_6)\text{-}6\text{-}(OMe)\text{-}nido\text{-}5\text{-}RuB_9H_{12}]$, 925–30
Preparation, structure, and nuclear magnetic resonance properties of the nine-vertex *nido*-rhenaborane $[(PMe_2Ph)_3H_2ReB_8H_{11}]$ and some related chemistry, 1969–82
Pentamethylcyclopentadienylrhodaborane chemistry. Part 4. The isolation, molecular structure, and nuclear magnetic resonance study of an interesting phosphino-bridged *arachno*-type nine-vertex rhodaborane $[2,5\text{-}(\mu\text{-}PPh_2)\text{-}1\text{-}(PHPh_2)\text{-}2\text{-}(\eta^5\text{-}C_5Me_5)\text{-}2\text{-}RhB_8H_9]$, 2059–64
Metallaheteroborane chemistry. Part 3. Synthesis of $[2,2\text{-}(PR_3)_2\text{-}1,2\text{-}TePtB_{10}H_{10}]$ (R_3 = Et_3, Bu^n_3, or Me_2Ph), their characterisation by nuclear magnetic resonance spectroscopy, and the crystal and molecular structure of $[2,2\text{-}(PEt_3)_2\text{-}1,2\text{-}TePtB_{10}H_{10}]$, 2555–64
Comparative metallaborane chemistry: preparation and nuclear magnetic resonance studies of some *nido*-5-metalladecaboranes of rhodium, iridium, ruthenium, and osmium, 2597–600
Metallaheteroborane chemistry. Part 4. The synthesis of *closo*-$[2,2\text{-}(PPh_3)_2\text{-}2\text{-}H\text{-}1,2\text{-}XMB_{10}H_{10}]$ (X = Se or Te, M = Rh or Ir) compounds, their characterisation by nuclear magnetic resonance techniques, and the crystal and molecular structure of the X = Te, M = Rh complex, 2739–46
Pentamethylcyclopentadienylrhodaborane chemistry. Part 5. Preparation, molecular structure, and nuclear magnetic resonance spectra of the *arachno* ten-vertex rhodadecaboranes $[6\text{-}(\eta^5\text{-}C_5Me_5)\text{-}6,9\text{-}(RNC)_2\text{-}arachno\text{-}6\text{-}RhB_9H_{11}]$ (R = Me or *p*-MeC_6H_4), 2809–16
METALLACYCLE
Synthesis and thermal decomposition of palladacyclopentane derivatives of the type $[\overline{Pd(CH_2CHRCHRCH_2)L_2}]$ (R = H or Me). *X*-Ray crystal structure of $[\overline{Pd(CH_2CH_2CH_2CH_2)(bipy)}]$, 133–40
Ring expansion in dimetallacycle chemistry: preparation of a dimetallacyclopentanol from a dimetallacyclobutane, 2235–8
Reactivity of cyclopalladated compounds. Part 18. Compared reactivity of the Pd–C bonds of two closely related six-membered palladocyclic rings with substituted alkynes. *X*-Ray and molecular structures of $[\overline{Pd\{C(Ph)=C(R)C(Ph)=C(R)(o\text{-}C_6H_4N=CMeNHPh)\}}Cl]$ (R = CO_2Et) and $[\overline{Pd\{C(R)[C(CO_2Me)C(R)=C(R)C(R)=C(R)][o\text{-}C_6H_4N=CMe(OH)]\}}Cl]$ (R = CO_2Me), 2421–30
METALLACYCLOBUTANONE
Chemistry of metallacyclobutanones. Part 4. The synthesis of 1,3-diphenyl-substituted oxodimethylenemethane complexes of platinum(II) and palladium(II) *via* the dianion $[PhCHC(O)CHPh]^{2-}$, and the *X*-ray crystal structure of $[Pt\{\eta^3\text{-}CHPhC(O)CHPh\}(AsPh_3)_2]\cdot 2CH_2Cl_2$, 427–32
METALLACYCLOPENTANE
Synthesis, *X*-ray structure, and reactivity with Lewis acids of metallacyclopentane derivatives of rhodium(III) and iridium(III). Observation of the first boron trifluoride-promoted C–H bond activation in transition metal alkyls, 2983–94
METHANIDE
Synthesis of benzyl- or pentafluorobenzyl-diphenylphosphonio(diphenylphosphino)methanide complexes of gold(I) and gold(III) and their use as C-donor ligands, 155–8
METHANOL
Nucleophilic discrimination and the *trans* effect. The kinetics of displacement of X from *trans*-$[Pt(L)(X)Cl_2]^{n-}$ (L = Me_2SO, Et_2S, PMe_3, PEt_3, PPh_3, or $AsEt_3$; X = Cl, *n* = 1; X = MeOH, *n* = 0) by neutral and anionic nucleophiles, 2347–52
METHYL
Synthesis and thermal properties of adducts of trimethylindium with nitrogen-containing Lewis bases, 7–12
Synthesis and structural studies of dimethylindium(III) complexes with polydentate nitrogen donor ligands, and of monomethylindium(III) complexes containing alkoxide-bridged binuclear cations, 35–46
Preparation and characterization of diorgano- and dihalogeno-bis(monothio-β-diketonato)tin(IV) complexes. Crystal and molecular structures of $SnY_2(btbm)_2$ and $SnY_2(tacac)_2$ (Y = Me or Cl), 407–14
The molecular structure of gaseous trimethylarsenic difluoride as determined by electron diffraction, 451–6
Stereochemical non-rigidity of dithioether complexes of trimethylplatinum(IV) halides. *X*-Ray crystal structures of $[PtClMe_3(MeSCH_2CH_2SEt)]$ and $[PtIMe_3(MeSCH_2CH_2SBu^t)]$, 521–32
The synthesis, using hexamethyldialuminium, and reactivity of new (1—5-η-cyclopentadienyl)methyl(nitrosyl)-molybdenum complexes. Crystal structure of bromo(η⁵-cyclopentadienyl)methyl(nitrosyl)(triphenylphosphine)-molybdenum, 819–26
An *X*-ray crystallographic investigation of the structures of pyrazine adducts of diphenyltin dichloride and dimethyltin dichloride, 2621–8
Nucleophilic (Michael) additions to $(Ph_2P)_2C{=}CH_2$ when chelated to dimethylplatinum(II), di(*o*-tolyl)platinum(II), or iodo(trimethyl)platinum(IV). Crystal structure of $[\overline{PtMe_3I\{(PPh_2)CH(PPh_2)CH_2NHCH_2Ph\}}]$, 3011–6
Adducts of trimethylaluminium with phosphine ligands; electronic and steric effects, 3047–50
METHYL ACETOACETATE
Role of the nature of the metal centre in the catalysed addition of β-dicarbonyls to electrophilically activated nitriles, 1213–6
METHYLENE
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 81. Reactions of the compound $[Fe_2(\mu\text{-}CH_2)(CO)_8]$ with alkylidyne–molybdenum and –tungsten complexes. Reactivity of the product $[WFe\{\mu\text{-}\sigma\text{:}\eta\text{-}CH{=}CH(C_6H_4Me\text{-}4)\}(CO)_6(\eta\text{-}C_5H_5)]$, and crystal structures of the species $[W_2Fe(\mu_3\text{-}CC_6H_4Me\text{-}4)\{\mu\text{-}\sigma\text{:}\eta\text{-}C(C_6H_4Me\text{-}4){=}CH_2\}(CO)_6(\eta\text{-}C_5H_5)_2]$ and $[WFe\{\mu\text{-}C(Et)C(Et)C(H)CH(C_6H_4Me\text{-}4)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$, 3017–30
MICA
X-Ray photoelectron diffraction studies of the micas lepidolite and biotite, 859–80
MOLECULAR ORBITAL
Bonding in clusters. Part 9. The *closo–nido* relationship; and MNDO computational study, 105–10
Study of relative stabilities of the intermediates in catalytic carbon monoxide hydrogenation reactions: *ab initio* calculations on the model compounds $[Fe(CO)_2(PH_3)_2H_2]$, $[Fe(CO)_2(PH_3)_2(CHO)H]$, $[Fe(CO)_2(PH_3)_2(CH_2O)]$, and $[Fe(CO)(PH_3)_2(CHO)_2]$, 249–52
Iron–formaldehyde interaction: *'ab initio'* calculations on the model compounds $[Fe(CO)_{4-n}(PH_3)_n(\eta^2\text{-}CH_2O)]$ (*n* = 0, 2, or 4), 321–8
A model for the interpretation of the absorption and circular dichroism spectra of tris(di-imine) complexes of iron(II) and ruthenium(II), 393–400
A reconsideration of the role of slippage in the activation of co-ordinated olefins towards nucleophilic attack, 1037–44
Crystal and molecular structure of bis(2-amino-5-methyl-1,3,4-thiadiazole-N^3)dibromomercury(II). A spectroscopic study and INDO calculations, 1075–8
Experimental and theoretical studies of the reactions of electrophiles with cationic formyl complexes; formation of methoxy- and hydroxy-carbene complexes of ruthenium(II) and osmium(II), 1079–82

MOLECULAR ORBITAL (contd)
A theoretical analysis of high-nuclearity metal carbonyl clusters, 1657–64
Ligand-field analysis of the ion VO^{2+}: application of the angular overlap model to the electronic absorption spectrum of bis(acetylacetonato)oxovanadium(IV) in various solvents, 1665–70
Photoelectron spectroscopic studies of the electronic structure of some silatranes, 1963–8
Photoelectron spectra of sulphidoborons XBS where X = H, F, Cl, or Br, 2041–6
Stereoelectronic effects in R–NSN–R systems. An MNDO and *ab initio* SCF-MO study, 3051–4

MOLYBDENUM
Synthesis and characterization of Ti_5Te_4-type molybdenum cluster compounds, $A_xMo_5As_4$ (A = Cu, Al, or Ga), 1–6
Cyclo-oligomerisation reactions of bis(alkyne) and η^2-vinyl complexes of molybdenum and tungsten with t-butyl isocyanide leading to iminocyclopentadiene derivatives, 27–34
Synthesis and reactions of d^0 imido aryl derivatives of chromium, molybdenum, and tungsten. Crystal structures of $Cr(NBu^t)_2(C_6H_2Me_3\text{-}2,4,6)_2$, $Mo(NBu^t)_2(C_6H_3Me_2\text{-}2,6)_2$, and $Cr(NBu^t)_2[C(C_6H_2Me_3\text{-}2,4,6)\text{=}NBu^t](C_6H_2Me_3\text{-}2,4,6)$, 53–60
Conjugate addition of acetylides to complexes of type $[M(CO)_4\{(Ph_2P)_2C\text{=}CH_2\}]$ (M = Cr, Mo, or W): crystal structure of $[M(CO)_4\{(Ph_2P)_2C\text{=}CHCH\text{=}CHPh\}]$ formed by the base-catalysed isomerization of $[M(CO)_4\{(Ph_2P)_2\text{-}CHCH_2C\equiv CPh\}]$, 89–92
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 69. Reactions of $[MoW(\equiv CC_6H_4Me\text{-}4)(CO)_2(\eta\text{-}C_5H_5)]$ with but-2-ene; crystal structures of $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)\}(CO)_3(\eta\text{-}MeC_2Me)_2(\eta\text{-}C_5H_5)]$ and $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(\text{=}CH_2)C(H)MeC(O)\}(CO)_6(\eta\text{-}C_5H_5)]\cdot 0.5CH_2Cl_2$, 207–14
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 7. Compounds containing strongly interacting redox centres derived from *para*-substituted anilines and phenols, 293–300
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 8. Complexes exhibiting weak or intermediate interaction between two redox centres, 301–8
Reactivity of cationic molybdenum(II) complexes. Part 1. Hydride reduction of the 18 electron complexes $[Mo(CO)_3(\eta\text{-}C_5Me_5)L]^+$ [L = PPh_3 or $P(OMe)_3$] and isolation of the thermally stable formyl complex *cis*-$[Mo(CO)_2(\eta\text{-}C_5Me_5)\{P(OMe)_3\}(CHO)]$. Crystal structure of $[Mo(CO)_3(\eta\text{-}C_5Me_5)(PPh_3)]BF_4\cdot 0.5MeOH$, 329–34
The crystal structure of nonachlorodimolybdenum(V) heptachlorodioxodimolybdate(V), 485–8
Complexes of 1,1,2-tris(diphenylphosphino)ethane with Group 6 metal carbonyls, 503–8
Diazoalkane complexes of molybdenum and tungsten *via* hydrazido(2−)-complexes, 553–6
Mechanism of the reaction of $[Mo(\eta\text{-}C_6H_6)(Me_2PCH_2CH_2PMe_2)(\eta\text{-}C_2H_4)H]^+$ with PMe_3 giving $[Mo(\eta\text{-}C_6H_5Et)(dmpe)(PMe_3)H]^+$: metal-to-ring migration of an ethyl group, 557–78
Reactivity of cationic molybdenum(II) complexes. Part 2. Electrochemical reduction of the eighteen-electron complexes $[Mo(CO)_3(\eta^5\text{-}C_5Me_5)L]^+$ [L = CO, *p*-MeC_6H_4NC, or $P(OMe)_3$]. Crystal structure of $[Mo_2(CO)_6(\eta^5\text{-}C_5Me_5)_2]$, 635–40
Production of binary oxides by photolysis of $M(CO)_6$ molecules (M = Cr, Mo, or W) isolated in O_2-doped argon matrices, 809–18
The synthesis, using hexamethyldialuminium, and reactivity of new (1—5-η-cyclopentadienyl)methyl(nitrosyl)-molybdenum complexes. Crystal structure of bromo(η⁵-cyclopentadienyl)methyl(nitrosyl)(triphenylphosphine)-molybdenum, 819–26
Infrared, Raman, and resonance-Raman spectra of $[Mo_2(O_2CCH_3)_4]$ and $[Mo_2(O_2CCD_3)_4]$, 973–82
Chemistry of phosphido-bridged dimolybdenum complexes. Part 1. High-yield synthesis of $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}H)(\mu\text{-}PPh_2)(CO)_4]$ and its reactions with organophosphorus ligands: *X*-ray crystal structure of $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}H)(\mu\text{-}PPh_2)(CO)_3\{P(OMe)_3\}]$, 1083–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 70. Tetranuclear metal compounds with rhenium–molybdenum or –tungsten bonds. Crystal structures of $[Mo_2Re_2(\mu_3\text{-}CC_6H_4Me\text{-}4)_2(\mu\text{-}CO)_2(CO)_7(\eta\text{-}C_5H_5)_2]\cdot 1.5CH_2Cl_2$ and $[W_2Re_2(\mu\text{-}H)(\mu_3\text{-}\sigma\text{:}\sigma'\text{:}\eta^2\text{-}C\text{=}CH_2)(\mu_3\text{-}CMe)(\mu\text{-}CO)(CO)_8(\eta\text{-}C_5H_5)_2]$, 1121–30
Pentamethylcyclopentadienyl molybdenum and tungsten carbene complexes. *X*-Ray crystal structures of *cis*- and *trans*-$[MoI(CO)_2\{\text{=}C(CH_2)_3O\}(\eta\text{-}C_5Me_5)]$, 1449–56
Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of $[(\eta^5\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}Ag(PPh_3)\}(\mu\text{-}PPh_2)Mn(CO)_4]$ and $[(\eta\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}I)(\mu\text{-}PPh_2)Mn(CO)_4]$, 1683–8
Interaction of acetonitrilebis(cyclopentadienyl)molybdenum(II) or tris(acetonitrile)tricarbonylmolybdenum(0) in acetonitrile with tetrafluoroboric acid. *X*-ray crystal structures of $[Mo^{IV}(\eta^5\text{-}C_5H_5)_2(MeCN)(CH\text{=}CHMe)][BF_4]_2$, $[Mo^{IV}(\eta^5\text{-}C_5H_5)_2(PMe_3)_2][BF_4]_2$, $[Mo^0(CO)_2(MeCN)_3(\eta^3\text{-}CH_2CHNH_2)]_2BF_3$, and $[Mo^{III}_2(\mu\text{-}O)(MeCN)_{10}][BF_4]_4$, 1737–42
Complexes of osmium, uranium, molybdenum, and tungsten with the catechol amines adrenaline, noradrenaline, dopamine, dopa, and isoproterenol, 1817–22
Reactions of co-ordinated ligands. Part 43. Alkyne linking reactions at dimetal centres. Synthesis and structures of $[Mo_2\{\mu\text{-}(\sigma,\eta^3\text{:}\eta^2\text{:}\eta^3,\sigma\text{-}C_8H_4Bu^t_4)\}(\eta\text{-}C_5H_5)_2]$, $[Mo_2\{\mu\text{-}(\sigma,\eta^3\text{:}\eta^3,\sigma\text{-}CH\text{=}CHBu^tC_6H_2Bu^t_3)\}(\eta\text{-}C_5H_5)_2]$, and $[FeMo(CO)_2(C_4Me_2Ph_2)(\eta\text{-}C_5H_5)_2]$, 1843–52
Synthesis and reactivity of mononuclear molybdenum phosphido complexes, $[Mo(CO)_2\{P(Cl)R\}(\eta\text{-}C_5H_5)]$[R = $CH(SiMe_3)_2$ or $NCMe_2CH_2CH_2CH_2CMe_2$]. *X*-Ray crystal structures of $[Mo(CO)_2\{P(X)(NCMe_2CH_2CH_2CH_2CMe_2)\}(\eta\text{-}C_5H_5)]$ (X = Cl or NMe_2) and $[Mo_2(CO)_4\{\mu\text{-}P_2[CH(SiMe_3)_2]_2\}(\eta\text{-}C_5H_5)_2]$, 2127–34
Synthesis and reactivity of dienyl–metal compounds. Part 30. Alkylation of thiolato bridges: a route to stable dialkyl sulphide bridged dinuclear molybdenum complexes. Crystal structure determination of $[(\eta\text{-}C_5H_5)(CO)Mo(\mu\text{-}SMe_2)_2Mo(PMe_3)(\eta\text{-}C_5H_5)][BF_4]_2$, 2171–6
Co-condensation of molybdenum atoms with the bulky tertiary diphosphine 1,2-bis(di-isopropylphosphino)ethane: the molecular structure of $[MoH_4(Pr^i_2PCH_2CH_2PPr^i_2)_2]$, 2227–30
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$, 2239–40
Insertion of carbon dioxide into a molybdenum–hydrogen bond. Photochemical formation of hydridoformato complex of molybdenum(II), 2241–2
Kinetics of redox reactions between complexes of molybdenum and iron: the oxidation of iron(II) by molybdenum(VI) and of $[Mo(H_2O)_6]^{3+}$ by $[Fe(H_2O)_6]^{3+}$, 2397–402
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron– molybdenum compounds with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2C(Me)C(Me)\}(CO)_4(\eta\text{-}C_5H_5)]$, $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2\}(CO)_5(\eta\text{-}C_5H_5)]$, and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CH_2PMe_3)CHMe\}(CO)_5(\eta\text{-}C_5H_5)]$, 2431–42
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 78. Reactions of $[MoFe(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_6(\eta\text{-}C_5H_5)]$ with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(O)C(Et)C(Et)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$ and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C[C(O)Me]\}(CO)_5(\eta\text{-}C_5H_5)]$, 2443–52
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 79. Synthesis and reactions of the alkylidynemetal complexes $[M(\equiv CR)(CO)_2(\eta\text{-}C_5H_5)]$ (R = $C_6H_3Me_2$-2,6, M = Cr, Mo, or W; R = C_6H_4Me-2, C_6H_4OMe-2, or $C_6H_4NMe_2$-4, M = Mo); crystal structure of the compound $[MoFe(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta\text{-}C_5H_5)]$, 2453–66
The oxidation of alkyne-bridged dimolybdenum complexes, 2509–12
Organohydrazido(2−) complexes of molybdenum and tungsten

MOLYBDENUM (contd)
from α,ω-dibromides; crystal and molecular structures of (azetidinylimido)bis[1,2-bis(di-*p*-tolylphosphino)ethane]-bromotungsten bromide–dichloromethane (1/3), 2525–34
Synthesis and *X*-ray crystal structure of acetonitriletetrakis(2,4,6-triisopropylthiophenolato)molybdenum(IV), 2535–8
The protonation of molybdenum and tungsten bis(diphosphine)-bis(dinitrogen) complexes: the crystal and molecular structure of bis[1,2-bis(diethylphosphino)ethane]bromo[hydrazido(2)]-tungsten bromide–methanol (2/1), 2545
Preparation and redox properties of the cuboidal molybdenum(III) aqua ion $[Mo_4S_4(H_2O)_{12}]^{4+}$, 2579–84
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$ **(1988, 2239)**, 2683
Synthesis and spectroscopic properties of the 'mixed' seven-co-ordinate complexes $[MI_2(CO)_3L(L')]$ [M = Mo or W; L,L' = PPh_3, $PPh_2(C_6H_{11})$, $PPh(C_6H_{11})_2$, $AsPh_3$, or $SbPh_3$] and rearrangement of selected $[MI_2(CO)_3L(L')]$ to $[HL][MI_3(CO)_3L']$. *X*-Ray crystal structure of $[PPh_2(C_6H_{11})H][WI_3(CO)_3(SbPh_3)]\cdot Et_2O$, 2729–34
The syntheses and electrochemistry of some molybdenum mononitrosyl complexes containing the tripodal ligand $[Co(\eta^5\text{-}C_5H_5)\{P(=O)(OEt)_2\}_3]^-$, 2769–74
Synthetic and structural studies on organomolybdenum and organotungsten complexes containing bismuth. *X*-Ray crystal structures of $[BiCl\{Mo(CO)_3(\eta\text{-}C_5H_5)\}_2]$ and $[BiCl\{Mo(CO)_2(CNBu^t)(\eta\text{-}C_5H_5)\}_2]$, 2941–52
Dinuclear allyl and μ-vinyl complexes from the reactions of a μ-hydrido dimanganese and a μ-hydrido manganese– molybdenum complex with alkynes containing α-methyl or α-methylene substituents, 2953–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 81. Reactions of the compound $[Fe_2(\mu\text{-}CH_2)(CO)_8]$ with alkylidyne–molybdenum and –tungsten complexes. Reactivity of the product $[WFe\{\mu\text{-}\sigma\text{:}\eta\text{-}CH{=}CH(C_6H_4Me\text{-}4)\}(CO)_6(\eta\text{-}C_5H_5)]$, and crystal structures of the species $[W_2Fe(\mu_3\text{-}CC_6H_4Me\text{-}4)\{\mu\text{-}\sigma\text{:}\eta\text{-}C(C_6H_4Me\text{-}4){=}CH_2\}(CO)_6(\eta\text{-}C_5H_5)_2]$ and $[WFe\{\mu\text{-}C(Et)C(Et)C(H)CH(C_6H_4Me\text{-}4)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$, 3017–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 83. Molybdenum and tungsten complexes containing the alkylidyne group $C\{\eta^6\text{-}C_6H_4(OMe\text{-}2)Cr(CO)_3\}$, 3035–40
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 77. Reactions of iron– molybdenum compounds with alkynes; crystal structures of $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2C(Me)C(Me)\}(CO)_4\text{-}(\eta\text{-}C_5H_5)]$, $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CHMe)CH_2\}(CO)_5(\eta\text{-}C_5H_5)]$, and $[MoFe\{\mu\text{-}C(C_6H_4Me\text{-}4)C(CH_2PMe_3)CHMe\}(CO)_5(\eta\text{-}C_5H_5)]$ **(1988, 2431)**, 3063

MÖSSBAUER
^{197}Au Mössbauer spectra of complexes of bis(diphenylphosphino)amine containing gold(I), gold(II), and gold(III), 23–6
An iron-57 and gold-197 Mössbauer spectroscopic investigation of the bonding in two gold–iron cluster compounds, 781–4
A potential iron pharmaceutical composition for the treatment of iron-deficiency anaemia. The crystal and molecular structure of *mer*-tris-(3-hydroxy-2-methyl-4*H*-pyran-4-onato)iron(III), 1159–64
Organotin biocides. Part 11. Triphenyltin benzoates: electronic *versus* steric control of structure, 1259–66
Synthesis, characterization, and crystal structures of tin(IV) 1-pyrrolethiocarboxylates, 1533–42
Ruthenium-99 Mössbauer study of ruthenium red and its derivatives, 1679–82
The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)\{\mu\text{-}Ph_2E(CH_2)_nE'Ph_2\}(CO)_{12}]$ (n = 1 or 2, E = E' = As or E = As, E' = P; n = 2, E = E' = P). *X*-Ray crystal structure of $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)(\mu\text{-}Ph_2AsCH_2PPh_2)(CO)_{12}]$, 1795–802
Discontinuous high spin ⇌ low spin transition in an iron(II) complex $[FeL_2(NCS)_2]$ with the pharmaceutical agent bromazepam, 1999–2002
An investigation of the titanium–antimony–oxygen system by *X*-ray diffraction, antimony-121 Mössbauer spectroscopy, and temperature-programmed reduction, 2161–6
Antimony-doped rutile titanium(IV) oxide, 2167–70
Mössbauer and preparative studies of some iron(II) complexes of diphosphines, 2865–70

NAPHTHYL
Synthesis of cyclometallated naphthylpalladium complexes *via* transmetallation reactions of naphthylmercury with palladium species. Crystal structure determination of $[\{Pd(mxn)(O_2CMe)\}]$, 2975–82

NEUTRON DIFFRACTION
Polarised neutron diffraction study of spin localisation in Nb_6I_{11}, 111–6
Covalent bonding and spin density in *cis*-$[Fe(bipy)_2Cl_2][FeCl_4]$ (bipy = 2,2'-bipyridyl) studied by polarised neutron diffraction, 117–22

NICKEL
Nickel–iridium carbonyl clusters. Synthesis and solid-state structure of the trianion $[Ir_3Ni_6(\mu\text{-}CO)_6(\mu_3\text{-}CO)_2(CO)_9]^{3-}$. The first example of a mixed iridium–nickel carbonyl cluster, 201–6
Complexes of functional phosphines. Part 11. β-Ketophosphine complexes of nickel, palladium, and platinum. Crystal structures of *trans*-$[NiX_2(HL)_2]$ [X = Cl or I, HL = $Ph_2PCH_2C(O)Ph$], 353–62
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 421–6
Synthesis, reactions and copper(II), nickel(II), and zinc(II) complexes of *N*-(2-pyridinyl)ketothioacetamides, 433–44
Synthesis of a thirteen-membered tetra-azamacrocycle employing formaldehyde and nitroalkanes directed by metal ions. Crystal structures of (12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)copper(II) perchlorate and μ-chloro-1,1,1-trichloro-2-(12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)dicopper(II), 497–502
Reactivity of ethylenebis(dithiocarbamate) and diethyldithiocarbamate ligands towards phosphine complexes of nickel(II), 537–40
A novel co-ordination mode for the squarate ligand [dihydroxycyclobutenedionate(2−)]: synthesis, crystal structure, and magnetic properties of *catena*-diaqua(2,2'-bipyridyl)-μ-(squarato-O^1,O^2)-nickel(II) dihydrate, 587–90
Formation and structure of $[Ni_3(\mu_3\text{-}S)(\mu\text{-}SMe)_3(SMe)_3]^{2-}$, a cyclic trinuclear metal–sulphide–thiolate cluster with simple monofunctional thiolate ligands, 657–60
Kinetics and mechanisms of the reactions of nickel(II) with 4,4,4-trifluoro-1-(2-thienyl)butane-1,3-dione in aqueous solution, 905–8
Possible biological activity in proton, metal, and aminohydroxamic acid equilibria. Protonation and complex formation reactions between *N*-hydroxy-D-asparagine and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 953–60
Reactions of polysulphide with metal–phosphine species. Synthesis and *X*-ray crystal structure of $[\{Ni(bppte)(\mu\text{-}OH)\}_2][ClO_4]_2\cdot(CH_3)_2CO$, 1063–6
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution **(1988, 421)**, 1107
Dithiolene-like nickel complexes of the methyl ester of dithiocarbazic acid and its N^3 phenyl- and benzyl-substituted derivatives. Crystal and molecular structure of $[Ni\{PhNC_6H_4NNC(S)SMe\}(NCS)]$, 1217–24
Interaction of metal ions with 6-oxopurine nucleotides. Part 2.[1] *X*-Ray structures of ternary nickel(II) complexes with 2'-deoxyguanosine 5'-monophosphate or guanosine 5'-monophosphate, 1303–8
Synthesis, magnetic properties, redox behaviour, and crystal structure of the bridged binuclear nickel(II) complex $[Ni_2(\mu\text{-}OH)(\mu\text{-}CH_3CO_2)_2L_2]ClO_4\cdot H_2O$, 1367–70
Electroanalytical and spectrophotometric investigations on the metal(II)-1,2-bis(diphenylphosphino)ethane–acetylacetonate system (M = Ni, Pd, or Cu) in acetonitrile, 1425–8
Studies on metal complexes of *ortho*-quinone mono-oximes. Part 6. Redox behaviour of bis(4-chloro-1,2-benzoquinone 2-oximato)-copper(II) and -nickel(II); synthesis and characterization of reduced species containing a paramagnetic ligand, 1497–500

NICKEL (contd)
Crystal structure of $NH_4[Ni\{S_2C_2(CN)_2\}_2]\cdot H_2O$, the first equidistant stack d^7 monoanion metal dithiolene complex, 1689–92
Studies involving mixed-donor macrocyclic ligands. A comparative study of the influence of medium effects on the stabilities of complexes of Co^{II}, Ni^{II}, and Cu^{II} with 14- to 16-membered O_2N_2-donor macrocycles, 1733–6
Binuclear nickel(II) and copper(II) complexes containing an endogenous alkanethiolato-bridging sulphur atom and exogenous μ-pyrazolate (pz) group. Crystal structure of $[Ni_2L(pz)]$ [L = *NN'*-3-mercaptopentane-1,5-diylbis(salicylideneiminate)(3−)], 1823–6
Axial co-ordination and ion-pair formation for *R,S,R,S*-1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecanenickel(II) perchlorate in various mixed solvents with nitrobenzene, 1935–42
Electrochemical studies of nickel(II) and cobalt(II) complexes of tetra-azamacrocycles bearing a pyridine functional group and *X*-ray structures of $[Ni^{II}(L^3)Cl]ClO_4$ and $[Ni^{II}(L^3)][ClO_4]_2\cdot H_2O$ {L^3 = *meso*-2,3,7,11,12-pentamethyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}, 2153–60
Kinetic studies of the reduction of nickel oxime complexes by tris(1,10-phenanthroline)cobalt(II) and hydroquinone in aqueous media, 2279–86
Template reactions of 1,4-bis(α-carboxybenzylidenehydrazino)phthalazine with cobalt(II), nickel(II), and chromium(III), 2293–6
Sulfur–nitrogen bonded metal chelates. Part 17. Reactions of alcohols with the co-ordinated nitrile in nickel(II) complexes $[NiL(NCR)][ClO_4]$ (L = a *S,N,N*-tridentate anion; R = Me, Et, or Ph) under different conditions, 2373–8
Synthesis and co-ordination chemistry of two penta-azamacrocycles containing a 1,4-piperazine backbone. Crystal structure determinations of 6,12-dioxo-1,5,13,17,22-penta-azatricyclo[15.2.2.$1^{7,11}$]docosa-7(22),8,10-triene and 1,5,13,17,22-penta-azatricyclo[15.2.2.$1^{7,11}$]docosa-7(22),8,10-trienenickel(II) perchlorate, 2959–64
NIOBIUM
Polarised neutron diffraction study of spin localisation in Nb_6I_{11}, 111–6
Synthesis and crystal structure of tris[bis(trimethylsilyl)amido]oxoniobium(v): a four-co-ordinated oxo niobium precursor, 533–6
cis- and *trans*-Dichloro chelate complexes of niobium(IV): synthesis and structure of *trans*-dichloro[*NN'*-ethylenebis(acetylacetonylideneiminato)(2−)]niobium(IV) and *cis*-dichloro{7,16-dihydro-6,8,15,17-tetramethyldibenzo[*b,i*]-[1,4,8,11]tetra-azacyclotetradecinato(2−)}niobium(IV)–acetonitrile (1/2), 1361–6
Oxidation and reduction chemistry of bis(η-arene)niobium compounds; the *X*-ray crystal structure of bis(η-toluene)(trimethylphosphine)niobium tetrafluoroborate, 1475–8
Formation and transformation of $3TeO_2\cdot Nb_2O_5$, 2087–90
Preparation of carbonyl, halogeno, and alkyl niobocene complexes and their reactions with oxygen. Crystal structures of $[Nb(\eta\text{-}C_5H_4SiMe_3)_2Cl_2]$, $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(O)Me]$ and $[Nb(\eta\text{-}C_5H_4SiMe_3)_2(C_6F_5)(CO)]$, 2685–94
NITRATE
Unusual changes in hyperfine coupling constants observed for copper(II) complexes with *N,N*-bis(benzimidazol-2-ylmethyl)amine and its homologues; *X*-ray crystal structure determinations of $[CuL^{Pr^i}(NO_3)(MeOH)]NO_3$, $[CuL^{Bu^t}(NO_3)(MeOH)]NO_3$, $[CuL^{Bu^t}(NO_3)]NO_3$, and $[CuL^{Bu^t}(NO_3)]NO_3$, 691–700
Co-ordination behaviour of dioxouranium(VI) nitrate in water–acetone mixtures, 2893–6
NITRIDE
Preparation and crystal structures of $[AsPh_4]_4[Tc_4N_4O_2(ox)_6]$ and $[AsPh_4]_2[TcO(ox)_2(Hox)]\cdot 3H_2O$: technetium complexes containing quadridentate or unidentate oxalato ligands, 1725–32
Technetium(v)–nitrido complexes of dithiocarbazic acid derivatives. Reactivity of $[Tc{\equiv}N]^{2+}$ core towards Schiff bases derived from *S*-methyl dithiocarbazate. Crystal structures of [*S*-methyl 3-(2-hydroxyphenylmethylene)dithiocarbazato]nitrido(triphenylphosphine)technetium(v) and bis(*S*-methyl 3-isopropylidenedithiocarbazato)nitridotechnetium(v), 1743–50
An electron spin resonance and optical study of the behaviour of $Cs_2[TcNCl_5]$ in hydrochloric acid solutions, 2585–90
NITRITE
Resonance-Raman spectra of nitro cobalt(III) complexes: $K_3[Co(NO_2)_6]$, $Na_3[Co(NO_2)_6]$, *trans*-$[NH_4][Co(NO_2)_4(NH_3)_2]$, and *trans*-$[Co(NO_2)_2(NH_3)_4]NO_3$, 1827–32
Synthesis, characterisation, and reactivity of new mononitrosyl complexes of ruthenium containing 2-(arylazo)pyridines: examples of strongly electrophilic nitrosyls, 2051–4
NITROGEN
Reaction of the lithium enolate of acetaldehyde, $Li(OCH{=}CH_2)$, with cyclothiaphosphazenes, 1099–102
Phosphorus–nitrogen compounds. Part 54. The reactions of geminal $N_3P_3(NH_2)_2Cl_4$ and of $N_3P_3(NH_2)Cl_5$ with alkoxide ions in alcohols. The geminal $\equiv P(NH_2)_2$ to non-geminal $\equiv P(NH_2)(OR)$ rearrangement. The crystal structures of *trans*-$N_3P_3(NH_2)_2(OPr^n)_4$, *cis*-$N_3P_3(NH_2)_2(OMe)_4$, and geminal $N_3P_3(NH_2)_2(OMe)_4$, 1169–78
Synthesis and nuclear magnetic resonance spectroscopy of geometrical isomers of 1,3,5-trimethyl-2,4,6-tris(*p*-methylphenoxy)-2,4,6-trioxocyclotriphosphazane: *X*-ray crystal structure of the *trans* isomer, 1371–6
Crystal structure of 2,2,4,4-tetrachloro-6,6-bis(trimethylsilylamino)cyclotriphosphazene, $N_3P_3Cl_4(NHSiMe_3)_2$, 1405–8
Cyclic sulphur–nitrogen compounds and phosphorus reagents. Part 2. Reactions of tetrasulphur tetranitride with (morpholino)diphenylphosphine. First observation of the ring contraction of 1,5-$[(OC_4H_8N)Ph_2PN]_2S_4N_4$ to $(OC_4H_8N)Ph_2PNS_3N_3$ in solution, 1445–8
Phosphorus–nitrogen compounds. Part 55. The reactions of 2,2,4,4-tetrachloro-6,6-diphenylcyclotriphosphazatriene with aliphatic difunctional alcohols, amines, and aminoalcohols. Proton and phosphorus-31 nuclear magnetic resonance spectroscopic studies of the products, 1757–64
Phosphorus–nitrogen compounds. Part 56. The solution synthesis of some *trans*-1,3-dialkyl-2,4-diphenyl-2,4-dithiocyclodi-λ^5-phosphazanes and their proton, carbon-13, and phosphorus-31 nuclear magnetic resonance spectra, 2591–6
Stereoelectronic effects in R–NSN–R systems. An MNDO and *ab initio* SCF-MO study, 3051–4
NITROGEN-15
The nitrogen-15 nuclear magnetic resonance criterion of bond angle in diazenido-complexes, 2935–40
NITROPHENYL
o-Nitrophenylpalladium(II) complexes. Crystal and molecular structures of *cis*-$[\overline{Pd\{o\text{-}C_6H_4N(O)O\}}_2]$ and *cis*-$[\overline{Pd\{o\text{-}C_6H_4N(O)O\}}(o\text{-}C_6H_4NO_2)(py)]$, 141–8
NITROSOBENZENE
Side-on bonded nitrosobenzene bridging two metal atoms, in a binuclear cyclopentadienyl cobalt complex: crystal structure of $[\{Co(cp)\}_2(\mu\text{-}PhNO)_2]$, 545–8
NITROSYL
Metal complexes of *N*-aryl-*N*-nitrosohydroxylamines: cleavage of N–N bonds to give metal nitrosyl species and organonitrogen compounds, and the crystal structure of $[RhCl_2\{ONN(C_6H_4Me\text{-}p)O\}(H_2O)(PPh_3)]\cdot 0.5Me_2CO$, 257–64
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 7. Compounds containing strongly interacting redox centres derived from *para*-substituted anilines and phenols, 293–300
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 8. Complexes exhibiting weak or intermediate interaction between two redox centres, 301–8
Reductive nitrosylation of tetraoxometallates. Part 14. Generation and proton induced disproportionation of the $Re(NO)^{3+}$ moiety. Synthesis, characterisation, and electrochemistry of novel hydroxo- and halogeno-nitrosyl complexes of rhenium, 793–802
The synthesis, using hexamethyldialuminium, and reactivity of new (1—5-η-cyclopentadienyl)methyl(nitrosyl)-molybdenum complexes. Crystal structure of bromo(η^5-cyclopentadienyl)methyl(nitrosyl)(triphenylphosphine)-molybdenum, 819–26
Ligand substitution of $[M(SnPh_3)(MeCN)_2(CO)_2(NO)]$ (M = Cr or W) and crystal structure of

NITROSYL (contd)
[Cr(SnPh$_3$)(MeCN){P(OMe)$_3$}(CO)$_2$(NO)], 1397–400
A low-spin iron nitrosyl complex from the reaction of NO with (5*H*,14*H*-6,8,15,17-tetramethyldibenzo[*b*,*i*][1,4,8,11]tetra-azacyclotetradecinato)iron(II), and its crystal structure, 1409–12
Synthesis, characterisation, and reactivity of new mononitrosyl complexes of ruthenium containing 2-(arylazo)pyridines: examples of strongly electrophilic nitrosyls, 2051–4
The syntheses and electrochemistry of some molybdenum mononitrosyl complexes containing the tripodal ligand [Co(η^5-C$_5$H$_5$){P(=O)(OEt)$_2$}$_3$]$^-$, 2769–74
Electrophilic behaviour of nitrosyls: the reactions of ketones with nitrosyls and the crystal and molecular structure of the product of the reaction between *trans*-chloro(nitrosyl)tetra(pyridine)ruthenium and acetone, 2965–70

N.M.R.
Reactions of acetylenes with noble metal carbonyl halides. Part 10. Synthesis and *X*-ray structural characterization of a new substituted diplatina-dioxapentalene complex [Cl(CO)Pt{CMe=C(COOMe)C(=O)}PtCl(PPh$_3$)], 17–22
Effect of geometrical isomerism on metal nuclear magnetic resonance chemical shifts in octahedral d^6 transition-metal complexes, 79–82
Synthesis and spectral characterization of cobalt(III) complexes of *N*-(*o*-carboxyphenyl)iminodiacetic acid, 159–62
Photocatalytic dimerization of olefins by decatungstate(VI), [W$_{10}$O$_{32}$]$^{4-}$, in acetonitrile and magnetic resonance studies of photoreduced species, 183–90
The solution behaviour of [Rh$_2$(COMe)$_2$(CO)$_2$I$_6$]$^{2-}$, its reactions with CO, pyridine, and methanol, and the *X*-ray structure of [AsPh$_4$][Rh(COMe)(CO)(NC$_5$H$_5$)I$_3$], 489–96
Complexes of 1,1,2-tris(diphenylphosphino)ethane with Group 6 metal carbonyls, 503–8
Stereochemical non-rigidity of dithioether complexes of trimethylplatinum(IV) halides. *X*-Ray crystal structures of [PtClMe$_3$(MeSCH$_2$CH$_2$SEt)] and [PtIMe$_3$(MeSCH$_2$CH$_2$SBu^t)], 521–32
The synthesis of di- and tetra-nuclear *p*-cymene–osmium hydride complexes; characterisation by ^{1}H(^{187}Os) reverse INEPT two-dimensional nuclear magnetic resonance spectroscopy, 629–34
Stereochemical non-rigidity in rhodium–triruthenium clusters studied by nuclear magnetic resonance spectroscopy, 675–84
Analysis of multinuclear lanthanide induced shifts. Part 5. The co-ordination polyhedron of 1:3 lanthanide(III)–glycolate complexes in aqueous solution, 717–24
Metallation of aliphatic carbon atoms. Part 5. Synthesis and characterization of the cyclopalladated complexes of 2-(trimethylsilyl)pyridine and their dynamic behaviour observed by proton nuclear magnetic resonance spectroscopy, 785–90
Carbon-13 and oxygen-17 nuclear magnetic resonance relaxation studies of [M$_3$(CO)$_{12}$] derivatives (M = Fe, Ru, or Os), 791–2
Organoruthenaborane chemistry. Part 6. The reaction of [{Ru(η^6-C$_6$Me$_6$)Cl$_2$}$_2$] with the *closo*-[B$_{10}$H$_{10}$]$^{2-}$ anion: characterisation of some *closo*-type eleven-vertex 1-ruthenaundecaboranes and the molecular structure of [5-(η^6-C$_6$Me$_6$)-6-(OMe)-*nido*-5-RuB$_9$H$_{12}$], 925–30
Analysis of multinuclear lanthanide induced shifts. Part 6. Structures of lanthanide(III) tris(oxydiacetate) complexes in aqueous solution, 961–6
Phosphorus-31 nuclear magnetic resonance studies on ^{15}N-labelled [Pt(S$_2$N$_2$)(PR$_3$)$_2$] (PR$_3$ = PMe$_3$, PEt$_3$, PPh$_3$, PMe$_2$Ph, or $\frac{1}{2}$Ph$_2$PCH$_2$CH$_2$PPh$_2$), and investigation into its protonation, 1053–8
Crystal and molecular structure of bis(2-amino-5-methyl-1,3,4-thiadiazole-N^3)dibromomercury(II). A spectroscopic study and INDO calculations, 1075–8
Organotin biocides. Part 11. Triphenyltin benzoates: electronic *versus* steric control of structure, 1259–66
Multinuclear magnetic resonance studies of the hydrolysis of aluminium(III). Part 8. Base hydrolysis monitored at very high magnetic field, 1347–56
Synthesis and nuclear magnetic resonance spectroscopy of geometrical isomers of 1,3,5-trimethyl-2,4,6-tris(*p*-methylphenoxy)-2,4,6-trioxocyclotriphosphazane: *X*-ray crystal structure of the *trans* isomer, 1371–6
A two-dimensional silicon-29 nuclear magnetic resonance spectroscopic study of the structure of the silicate anions present in an aqueous potassium silicate solution, 1457–60
Polyhedral thiaborane chemistry: a comparative nuclear magnetic resonance study of *arachno*-[6-SB$_9$H$_{12}$]$^-$ and *nido*-6-SB$_9$H$_{11}$, 1467–74
Stereochemical rigidity of the square-pyramidal W(CO)$_5$ moiety during 1,2- and 1,3-metallotropic shifts in sulphur ligand complexes, 1489–92
Hydride fluxionality in high-nuclearity osmium carbonyl clusters, 1517–22
Synthesis, characterization, and crystal structures of tin(IV) 1-pyrrolethiocarboxylates, 1533–42
Effects of sodium ions on the molecular dynamics of bis(aza-15-crown-5)thiuram disulphide, 1697–700
Preparation and nuclear magnetic resonance spectroscopy of [Ag$_2${μ-CH$_2$(PPh$_2$)$_2$}$_3$][O$_3$SCF$_3$]$_2$, a disilver(I) complex with three bridging CH$_2$(PPh$_2$)$_2$ ligands, 1709–12
Phosphorus–nitrogen compounds. Part 55. The reactions of 2,2,4,4-tetrachloro-6,6-diphenylcyclotriphosphazatriene with aliphatic difunctional alcohols, amines, and aminoalcohols. Proton and phosphorus-31 nuclear magnetic resonance spectroscopic studies of the products, 1757–64
Boron-11 and proton nuclear magnetic resonance study of *anti*-B$_{18}$H$_{22}$ and its anions, *anti*-[B$_{18}$H$_{21}$]$^-$ and *anti*-[B$_{18}$H$_{20}$]$^{2-}$. The crystal and molecular structure of [NMe$_4$]$_2$[*anti*-B$_{18}$H$_{20}$], 1785–94
Preparation, structure, and nuclear magnetic resonance properties of the nine-vertex *nido*-rhenaborane [(PMe$_2$Ph)$_3$H$_2$ReB$_8$H$_{11}$] and some related chemistry, 1969–82
Phosphorus-31 and selenium-77 nuclear magnetic resonance spectra of tetraphosphorus triselenide, 2055–8
Pentamethylcyclopentadienylrhodaborane chemistry. Part 4. The isolation, molecular structure, and nuclear magnetic resonance study of an interesting phosphino-bridged *arachno*-type nine-vertex rhodaborane [2,5-(μ-PPh$_2$)-1-(PHPh$_2$)-2-(η^5-C$_5$Me$_5$)-2-RhB$_8$H$_9$], 2059–64
Synthesis and dynamic nuclear magnetic resonance studies of co-ordinatively unsaturated alkyne complexes of tungsten(II), 2071–6
Derivatives of [Rh$_6$(CO)$_{13}$C]$^{2-}$: solution structure of [Rh$_6$H(CO)$_{13}$C]$^-$ from nuclear magnetic resonance measurements and the *X*-ray crystal structure of [Rh$_6$(CO)$_{11}$C(μ-Ph$_2$PCH$_2$CH$_2$PPh$_2$)]$^{2-}$, 2103–8
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. ^{109}Ag-{^{1}H} INEPT nuclear magnetic resonance studies on [Ag$_2$Ru$_4$(μ$_3$-H)$_2${μ-Ph$_2$P(CH$_2$)$_n$PPh$_2$}(CO)$_{12}$] (n = 1, 2, or 4) and *X*-ray crystal structure of [Ag$_2$Ru$_4$(μ$_3$-H)$_2$(μ-Ph$_2$PCH$_2$PPh$_2$)(CO)$_{12}$], 2177–86
Dinuclear complexes of rhodium and iridium with cyanide or thiocyanate bridges: molecular structure of [(PMe$_2$Ph)$_3$Cl$_2$Ir(μ-CN)IrCl$_2$(PMe$_2$Ph)$_3$][ClO$_4$], 2475–82
Synthesis and crystal structure of [Ru(η^5-C$_5$H$_4$CH$_2$CH$_2$PPh$_2$)(PPh$_3$)Cl], a compound having a cyclopentadienyl proton with a chemical shift of δ 1.91 p.p.m., 2491–4
Metallaheteroborane chemistry. Part 3. Synthesis of [2,2-(PR$_3$)$_2$-1,2-TePtB$_{10}$H$_{10}$] (R$_3$ = Et$_3$, Bu$^n_3$, or Me$_2$Ph), their characterisation by nuclear magnetic resonance spectroscopy, and the crystal and molecular structure of [2,2-(PEt$_3$)$_2$-1,2-TePtB$_{10}$H$_{10}$], 2555–64
Phosphorus–nitrogen compounds. Part 56. The solution synthesis of some *trans*-1,3-dialkyl-2,4-diphenyl-2,4-dithiocyclodi-λ^5-phosphazanes and their proton, carbon-13, and phosphorus-31 nuclear magnetic resonance spectra, 2591–6
Comparative metallaborane chemistry: preparation and nuclear magnetic resonance studies of some *nido*-5-metalladecaboranes of rhodium, iridium, ruthenium, and osmium, 2597–600
Lanthanide(III)-catalysed addition of glycolate to maleate. Investigation of intermediates using multinuclear magnetic resonance spectroscopy, 2723–8
Metallaheteroborane chemistry. Part 4. The synthesis of *closo*-[2,2-(PPh$_3$)$_2$-2-H-1,2-XMB$_{10}$H$_{10}$] (X = Se or Te, M = Rh or Ir) compounds, their characterisation by nuclear magnetic resonance techniques, and the crystal and molecular structure of the X = Te, M = Rh complex, 2739–46
Phosphorus-31 and carbon-13 nuclear magnetic resonance studies of unsymmetrical tetra-alkyldiphosphanes R^{1}R^{2}PPMe$_2$ and R^{1}R^{2}PPEt$_2$, 2775–80
The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic

N.M.R. (contd)
hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_nEPh_2\}(CO)_{12}]$ (M = Cu or Ag; E = As or P; n = 1 or 2). *X*-Ray crystal structure of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_2PPh_2\}(CO)_{12}]$, 2787–96
Proton nuclear magnetic resonance studies on haemin chloride in pyridine–water solution, 2797–802
Pentamethylcyclopentadienylrhodaborane chemistry. Part 5. Preparation, molecular structure, and nuclear magnetic resonance spectra of the *arachno* ten-vertex rhodadecaboranes [6-(η^5-C_5Me_5)-6,9-$(RNC)_2$-*arachno*-6-RhB_9H_{11}] (R = Me or *p*-MeC_6H_4), 2809–16
Co-ordinatively unsaturated alkyne complexes of tungsten: synthesis and dynamic nuclear magnetic resonance studies of some but-2-yne derivatives, 2855–64
The nitrogen-15 nuclear magnetic resonance criterion of bond angle in diazenido-complexes, 2935–40
Adducts of trimethylaluminium with phosphine ligands; electronic and steric effects, 3047–50
NUCLEOSIDE
Binary and ternary metal complexes of guanosine: stability and thermodynamic parameters, 67–72
NUCLEOTIDE
Interaction of metal ions with 6-oxopurine nucleotides. Part 1. *X*-Ray structures of ternary cobalt(III) complexes with inosine 5′-monophosphate or guanosine 5′-monophosphate, 1297–302
Interaction of metal ions with 6-oxopurine nucleotides. Part 2.[1] *X*-Ray structures of ternary nickel(II) complexes with 2′-deoxyguanosine 5′-monophosphate or guanosine 5′-monophosphate, 1303–8
OLEFIN
Photocatalytic dimerization of olefins by decatungstate(VI), $[W_{10}O_{32}]^{4-}$, in acetonitrile and magnetic resonance studies of photoreduced species, 183–90
A reconsideration of the role of slippage in the activation of co-ordinated olefins towards nucleophilic attack, 1037–44
OSMIUM
Spectroscopic studies on matrix isolated osmium pentafluoride oxide, osmium tetrafluoride oxide, and osmium difluoride trioxide, 61–6
Stepwise construction of $[Os_6(CO)_{18}(\mu_6\text{-}P)]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of $[Os_6(\mu\text{-}H)_2(CO)_{20}(MeCN)(\mu_3\text{-}PH)]$ and $[PPh_3Me][Os_6(CO)_{18}(\mu_6\text{-}P)]$, 173–82
Complexes of the platinum metals. Part 33. Synthesis of some ruthenium and osmium sulphonate derivatives: *X*-ray crystal structure of aqua(carbonyl)bis(toluene-*p*-sulphonato)bis(triphenylphosphine)ruthenium(II), 415–20
Synthesis, single-crystal *X*-ray structures, and fluxional behaviour of 1,2-$[Os_3(CO)_{10}(\mu\text{-dppe})]$ and its protonated derivative 1,2-$[Os_3(\mu\text{-}H)(CO)_{10}(\mu\text{-dppe})][PF_6]$ where dppe = $Ph_2PCH_2CH_2PPh_2$, 579–86
The synthesis of di- and tetra-nuclear *p*-cymene–osmium hydride complexes; characterisation by $^1H(^{187}Os)$ reverse INEPT two-dimensional nuclear magnetic resonance spectroscopy, 629–34
Carbon-13 and oxygen-17 nuclear magnetic resonance relaxation studies of $[M_3(CO)_{12}]$ derivatives (M = Fe, Ru, or Os), 791–2
Hydrido-clusters derived by protonation, hydrogenation, or photolytic decarbonylation of the chelating diphosphine compounds 1,1-$[Os_3(CO)_{10}(\text{diphosphine})]$ where diphosphine is $Ph_2PCH_2CH_2PPh_2$ or $Ph_2PCH_2CH_2CH_2PPh_2$, and crystal structure of $[OsH_2\{Ph_2P(CH_2)_3PC_6H_4\}(CO)_8]\cdot0.5CH_2Cl_2$, 827–32
Synthesis, reactivity, and spectroscopic studies of some tetranuclear osmium clusters. Structural characterization of $[Os_4H(CO)_{12}\{\mu_3\text{-}NC(O)Me\}\{M(PPh_3)\}]$ (M = Au or Cu) and $[N(PPh_3)_2][Os_4H_2(CO)_{12}I]$, 913–24
Matrix isolation and mass spectrometric studies on the vaporisation of OsO_2F_3: characterisation of molecular OsO_2F_3, 997–1000
Experimental and theoretical studies of the reactions of electrophiles with cationic formyl complexes; formation of methoxy- and hydroxy-carbene complexes of ruthenium(II) and osmium(II), 1079–82
Stepwise construction of $[Os_6(CO)_{18}(\mu_6\text{-}P)]^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of $[Os_6(\mu\text{-}H)_2(CO)_{20}(MeCN)(\mu_3\text{-}PH)]$ and $[PPh_3Me][Os_6(CO)_{18}(\mu_6\text{-}P)]$ **(1988, 173)**, 1107
Synthesis and characterisation of the tetranuclear phosphinidene clusters $[Os_3MH_2(CO)_{12}(PR)]$ (M = Os, R = Ph or cyclo-C_6H_{11} (M = Ru, R = cyclo-C_6H_{11}) and the crystal and molecular structure of $[Os_4(\mu\text{-}H)_2(CO)_{12}(\mu_3\text{-}PC_6H_{11})]$, 1199–204
Preparation, *X*-ray structural analysis, and method of interconversion of two isomeric forms of $[Os_6(CO)_{16}\{P(OMe)_3\}_2]$, 1205–12
Facile carbon–carbon bond formation on a triosmium cluster: crystal structures of $[Os_3(CO)_8\{C(Me)C(Me)C(O)C(Me)C(Me)C(Ph)C(Ph)\}]$ and $[Os_3(CO)_8\{P(OMe)_3\}\{C(Me)C(Me)C(O)C(Me)C(Me)\}]$, 1421–4
Hydride fluxionality in high-nuclearity osmium carbonyl clusters, 1517–22
N-Thionitrosamine complexes: substitution reactions of complexes $[MCl(C_6H_4Me\text{-}p)(CO)(PPh_3)_2(SNNMe_2)]$ (M = Ru or Os) and the crystal structure of $[OsCl(C_6H_4Me\text{-}p)(CO)(PPh_3)_2(SNNMe_2)]$, 1693–6
Complexes of osmium, uranium, molybdenum, and tungsten with the catechol amines adrenaline, noradrenaline, dopamine, dopa, and isoproterenol, 1817–22
Novel synthetic routes to disulphur and disulphur monoxide ligands: nucleophilic attack at co-ordinated imino-oxo-λ^4-sulphanes, 2027–32
Dinitrogen complexes of osmium(II) with thiolate co-ligands: *X*-ray structure of *mer*-$[OsCl(SC_6F_5)(N_2)(PMe_2Ph)_3]$, 2393–6
Infrared, resonance-Raman, and excitation profile studies of $[Os_2(O_2CCH_2Cl)_4Cl_2]$, $[Os_2(O_2CC_2H_5)_4Cl_2]$, and $[Os_2(O_2CC_3H_7)_4Cl_2]$: assignment of osmium–osmium, osmium–oxygen, and osmium–chlorine stretching vibrations, 2601–6
Redox reactions of osmium porphyrins, 2705–12
Protonation *versus* oxidation in the reactions of trifluoroacetic acid with dinuclear osmium(I) complexes: molecular structure of $[Os_2(MeCO_2)_2(\mu\text{-}H)(CO)_4(PMe_2Ph)_2][PF_6]$, 2753–8
OXALATE
Kinetic studies of the complexation of oxalate to hexa-aquairidium(III), 711–6
Preparation and crystal structures of $[AsPh_4]_4[Tc_4N_4O_2(ox)_6]$ and $[AsPh_4]_2[TcO(ox)_2(Hox)]\cdot3H_2O$: technetium complexes containing quadridentate or unidentate oxalato ligands, 1725–32
Structure, vibrational and electronic spectra, and bonding in *trans*-diaquabis(oxalato)vanadate(III) complex salts, $A[V(C_2O_4)_2(H_2O)_2]\cdot xH_2O$ (A = Cs, K, or NH_3Me), and the *X*-ray crystal structure of the potassium salt (x = 3), 2245–54
OXALOACETATE
Cerium(IV)-induced decarboxylation of penta-ammine oxaloacetatocobalt(III) perchlorate, 1413–6
OXIDATIVE ADDITION
The direct electrochemical synthesis of tin(II) derivatives of aromatic 1,2-diols, and a study of their oxidative addition reactions, 2539–44
OXIDE
Spectroscopic studies on matrix isolated osmium pentafluoride oxide, osmium tetrafluoride oxide, and osmium difluoride trioxide, 61–6
An investigation of non-stoicheiometry in the systems $SrFeO_{3-y}$ and $SrCoO_{3-y}$ by iron and cobalt *K*-edge extended *X*-ray absorption fine structure spectroscopy, 83–8
The crystal structure of nonachlorodimolybdenum(V) heptachlorodioxodimolybdate(V), 485–8
Synthesis and crystal structure of tris[bis(trimethylsilyl)amido]oxoniobium(V): a four-co-ordinated oxo niobium precursor, 533–6
Technetium(V) and rhenium(V) complexes with Schiff-base ligands containing the ONNNO donor atom set. Crystal structure of [*N*,*N*′-3-azapentane-1,5-diylbis(salicylideneiminato)(3−)-*O*,*O*′,*N*,*N*′,*N*″]oxotechnetium(V), 611–6
Synthesis and characterization of a new double perovskite: $LaCaMnCoO_6$, 775–80
Production of binary oxides by photolysis of $M(CO)_6$ molecules (M = Cr, Mo, or W) isolated in O_2-doped argon matrices, 809–18
Matrix isolation and mass spectrometric studies on the vaporisation

OXIDE (contd)
of OsO_2F_3: characterisation of molecular OsO_2F_3, 997–1000
Reaction of manganese(II) arsine oxide complexes with sulphur dioxide: some unexpected products. The *X*-ray crystal structure of $[(Ph_3AsO)_2H]I_3$, 1095–8
Co-ordination chemistry of higher oxidation states. Part 26. Spectroscopic studies of tellurate complexes of the trivalent Group 1B metals. *X*-Ray structure of $Na_3[Cu\{TeO_4(OH)_2\}_2]\cdot 16H_2O$, 1377–82
Ligand-field analysis of the ion VO^{2+}: application of the angular overlap model to the electronic absorption spectrum of bis(acetylacetonato)oxovanadium(IV) in various solvents, 1665–70
Ruthenium-99 Mössbauer study of ruthenium red and its derivatives, 1679–82
Crystal and molecular structure of 1,2;3,4-di-μ-*o*-aminobenzoato-*OO'*-1,3-bis(*o*-aminobenzoato-*O*)-1,2,4;2,3,4-di-μ_3-oxo-tetrakis[di-n-butyltin(IV)], 1719–24
Preparation and crystal structures of $[AsPh_4]_4[Tc_4N_4O_2(ox)_6]$ and $[AsPh_4]_2[TcO(ox)_2(Hox)]\cdot 3H_2O$: technetium complexes containing quadridentate or unidentate oxalato ligands, 1725–32
The chemistry in air of the rare-earth-metal sesquioxides. Comparative study of hexagonal and cubic neodymia samples, 1765–72
Complexes of osmium, uranium, molybdenum, and tungsten with the catechol amines adrenaline, noradrenaline, dopamine, dopa, and isoproterenol, 1817–22
The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 2. Reactivity of $[ReO(OR)Cl_2(PPh_3)_2]$ (R = Me or Et) with RNCS (R = Ph or *p*-MeC_6H_4). Crystal structure of the thiazetidine rhenium(V) complex $[ReOCl_2(PPh_3)\{p\text{-}MeC_6H_4N{=}C(OEt){-}S\}]$, 1857–60
Crystal growth, structure, and properties of $KLa(CrO_4)_2$, 1911–4
Studies on transition-metal oxo and nitrido complexes. Part 9. Periodato and tellurato oxo-ruthenium complexes as organic oxidants. *X*-Ray crystal structure of *trans*-$NaK_5[RuO_2(HIO_6)_2]\cdot 8H_2O$, 1983–8
Novel synthetic routes to disulphur and disulphur monoxide ligands: nucleophilic attack at co-ordinated imino-oxo-λ^4-sulphanes, 2027–32
A new modification of $TiTe_3O_8$, 2083–6
Formation and transformation of $3TeO_2\cdot Nb_2O_5$, 2087–90
Synthesis and characterization of the new mixed oxides $M(VTe)O_6$ (M = K, Rb, or Cs), 2141–4
An investigation of the titanium–antimony–oxygen system by *X*-ray diffraction, antimony-121 Mössbauer spectroscopy, and temperature-programmed reduction, 2161–6
Antimony-doped rutile titanium(IV) oxide, 2167–70
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$, 2239–40
Formation of molecular chromium(IV) oxide (CrO_2) by photolysis of $Cr(CO)_6$ in O_2-doped argon matrices, 2255–60
Formation of carbonato and hydroxo complexes of vanadium(IV) on reaction of carbonylbis(η-pentamethylcyclopentadienyl)vanadium(II) with dinitrogen oxide, 2505–6
Rhenium complexes of tetra-aza macrocycles: the synthesis and single-crystal *X*-ray structure of *trans*-$[Re(O)_2(cyclam)]Cl\cdot 2(BPh_3\cdot H_2O)$, 2645–8
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$ **(1988, 2239)**, 2683
Crystal structure and magnetic properties of the complex $[Cu(en)_2]_2[\{Fe(edta)\}_2O]\cdot 2H_2O$. A heterobimetallic Cu^{II}– Fe^{III} system containing a μ-oxo-di-iron(III) moiety, 2747–52
High-valent ruthenium oxo complexes of *NNN'N'*-tetramethyl-3,6-dimethyl-3,6-diazaoctane-1,8-diamine (L^1). *X*-Ray crystal structure determination of *cis*-$[Ru^{III}(L^1)Cl_2]ClO_4$, 2885–8

OXIME
Kinetic studies of the reduction of nickel oxime complexes by tris(1,10-phenanthroline)cobalt(II) and hydroquinone in aqueous media, 2279–86

OXYDIACETATE
Analysis of multinuclear lanthanide induced shifts. Part 6. Structures of lanthanide(III) tris(oxydiacetate) complexes in aqueous solution, 961–6

OXYGEN-17
Photocatalytic dimerization of olefins by decatungstate(VI), $[W_{10}O_{32}]^{4-}$, in acetonitrile and magnetic resonance studies of photoreduced species, 183–90
Analysis of multinuclear lanthanide induced shifts. Part 6. Structures of lanthanide(III) tris(oxydiacetate) complexes in aqueous solution, 961–6

OXYHAEMOCYANIN
Reaction between 1,3-diphenylisobenzofuran and a blue oxyhaemocyanin model compound, 2003–4

PALLADIUM
Synthesis and thermal decomposition of palladacyclopentane derivatives of the type $[Pd(CH_2CHRCHRCH_2)L_2]$ (R = H or Me). *X*-Ray crystal structure of $[Pd(CH_2CH_2CH_2CH_2)(bipy)]$, 133–40
o-Nitrophenylpalladium(II) complexes. Crystal and molecular structures of *cis*-$[Pd\{o\text{-}C_6H_4N(O)O\}_2]$ and *cis*-$[Pd\{o\text{-}C_6H_4N(O)O\}(o\text{-}C_6H_4NO_2)(py)]$, 141–8
$[RhPd_2(pyS)_4(\eta^3\text{-}C_4H_7)_2][BF_4]$: Synthesis and *X*-ray structure of a mixed-metal trinuclear complex containing two μ_3-pyridine-2-thionato (pyS) ligands, 235–8
Metal complexes of *N*-aryl-*N*-nitrosohydroxylamines: cleavage of N–N bonds to give metal nitrosyl species and organonitrogen compounds, and the crystal structure of $[RhCl_2\{ONN(C_6H_4Me\text{-}p)O\}(H_2O)(PPh_3)]\cdot 0.5Me_2CO$, 257–64
Complexes of functional phosphines. Part 11. β-Ketophosphine complexes of nickel, palladium, and platinum. Crystal structures of *trans*-$[NiX_2(HL)_2]$ [X = Cl or I, HL = $Ph_2PCH_2C(O)Ph$], 353–62
Chemistry of metallacyclobutanones. Part 4. The synthesis of 1,3-diphenyl-substituted oxodimethylenemethane complexes of platinum(II) and palladium(II) *via* the dianion $[PhCHC(O)CHPh]^{2-}$, and the *X*-ray crystal structure of $[Pt\{\eta^3\text{-}CHPhC(O)CHPh\}(AsPh_3)_2]\cdot 2CH_2Cl_2$, 427–32
Acid-catalysed additions of acetylenes to $[XPd(\mu\text{-}Ph_2PCH_2PPh_2)_2PdX]$ (X = Cl, Br, or I) to give dimetallated olefin complexes of type $[XPd(\mu\text{-}Ph_2PCH_2PPh_2)_2(\mu\text{-}HC{=}CR)PdX]$ (R = H, Ph, or C_6H_4Me-*p*), 457–60
Sulphonation of palladium–carbon bonds: synthesis and *X*-ray crystal structures of the disulphinato derivatives $[Pd\{S(O)_2CH_2CH_2CH_2CH_2S(O)_2\}(tmen)]$ (tmen = $Me_2NCH_2CH_2NMe_2$) and $[Pd\{S(O)_2Me\}_2(tmen)]$, 461–8
Metallation of aliphatic carbon atoms. Part 5. Synthesis and characterization of the cyclopalladated complexes of 2-(trimethylsilyl)pyridine and their dynamic behaviour observed by proton nuclear magnetic resonance spectroscopy, 785–90
Pillar chemistry. Part 4. Palladium(II)–2,2'-bipyridyl, –1,10-phenanthroline, and –2,9-dimethyl-1,10-phenanthroline complex pillars in α-zirconium phosphate, 851–8
Trifluoromethanesulphonato-*O* complexes of platinum(II) and palladium(II), 931–4
Syntheses of vinylidene-bridged A-frame palladium complexes containing $Ph_2PCH_2PPh_2$ or $Ph_2PCHMePPh_2$: protonation to give carbyne-bridged complexes, 1179–84
Electroanalytical and spectrophotometric investigations on the metal(II)-1,2-bis(diphenylphosphino)ethane–acetylacetonate system (M = Ni, Pd, or Cu) in acetonitrile, 1425–8
Synthesis and characterisation of binuclear cyclopalladated *p*-alkoxyphenylazo complexes: preparation of new mesogenic materials, 1565–8
Di- and tri-nuclear complexes of palladium(II) containing doubly- and triply-bridging pyridine-2-thionato (pyS) ligands: crystal structure of $[Pd_3(C_6H_4CH_2NMe_2)_3(pyS)_2][BF_4]$, 2193–200
Reactivity of cyclopalladated compounds. Part 18. Compared reactivity of the Pd–C bonds of two closely related six-membered palladocyclic rings with substituted alkynes. *X*-Ray and molecular structures of $[Pd\{C(Ph){=}C(R)C(Ph){=}C(R)(o\text{-}C_6H_4N{=}CMeNHPh)\}Cl]$ (R = CO_2Et) and $[Pd\{C(R)[C(CO_2Me)C(R){=}C(R)C(R){=}C(R)][o\text{-}C_6H_4N{=}CMe(OH)]\}Cl]$ (R = CO_2Me), 2421–30
Structure and dynamic behaviour of palladium(II) complexes formed from *trans*-N_2S_2 macrocyclic ligands and the crystal structure of $[PdL^1][PF_6]_2$ (L^1 = 7,8,17,18-tetrahydro-6*H*,16*H*-

PALLADIUM (contd)
dibenzo[*g*,*o*][1,9,5,13]-dithiadiazacyclohexadecine), 2573–8
Synthesis of cyclometallated naphthylpalladium complexes *via* transmetallation reactions of naphthylmercury with palladium species. Crystal structure determination of [{Pd(mxn)(O_2CMe)}], 2975–82
PENTA-AZATRICYCLODOCOSATRIENE
Synthesis and co-ordination chemistry of two penta-azamacrocycles containing a 1,4-piperazine backbone. Crystal structure determinations of 6,12-dioxo-1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-triene and 1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-trienenickel(II) perchlorate, 2959–64
PENTAFLUOROPHENYL
Synthesis of pentafluorophenyl(ylide)silver(I) complexes: *X*-ray structures of two modifications of [Ag(C_6F_5)(CH_2PPh_3)], 341–6
Reactions of pentafluorophenyl(ylide)-silver(I) or -gold(I) complexes with chlorobis(pentafluorophenyl)thallium(III), 701–4
Synthesis of heterobimetallic complexes containing cobalt–platinum or rhodium–platinum dative bonds. Molecular structure of [(η^5-C_5H_5)(CO)$_2$Rh→Pt(C_6F_5)$_2$(CO)], 3005–10
PENTALENYL
Allylation of cobalt-co-ordinated cyclo-octatetraene by the [Fe{P(OMe)$_3$}(NO)$_2$(η^3-allyl)]$^+$ cation: ring closure to 1,2,3,3a-tetrahydropentalenyl derivatives and the *X*-ray structure of [Co(η^5-C_8H_8R)(η-C_5Me_5)][PF_6] [R = $CH_2C(Me)$=CH_2], 1631–6
PENTAMETHYLCYCLOPENTADIENYL
Reactivity of cationic molybdenum(II) complexes. Part 2. Electrochemical reduction of the eighteen-electron complexes [Mo(CO)$_3$(η^5-C_5Me_5)L]$^+$ [L = CO, *p*-MeC_6H_4NC, or P(OMe)$_3$]. Crystal structure of [Mo$_2$(CO)$_6$(η^5-C_5Me_5)$_2$], 635–40
Pentamethylcyclopentadienyl molybdenum and tungsten carbene complexes. *X*-Ray crystal structures of *cis*- and *trans*-[MoI(CO)$_2${=C(CH_2)$_3$O}(η-C_5Me_5)], 1449–56
PENTAMETHYLDIETHYLENETRIAMINE
Lewis-base adducts of main Group 1 metal compounds. Part 2. Syntheses and structures of [Li_4Cl_4(pmdien)$_3$] and [LiI(pmdien)], 987–90
PENTANEDIONATE
Rhodium complexes possessing the unidentate anion of 2,4-pentanedione as a ligand; *X*-ray crystal structure of carbonyl(2,4-pentanedionato-*O*)bis(tri-isopropylphosphine)rhodium(I), 895–8
PEPTIDE
A potentiometric and spectroscopic study of the interaction of angiotensin II and some of its peptide fragments with copper(II), 887–94
Thermodynamic and spectrophotometric study of copper(II) and cadmium(II) homo- and hetero-nuclear complexes with L-histidylglycine in an aqueous medium, 1115–20
Copper(II) complexes with some tetrapeptides containing the 'break-point' prolyl residue in the third position, 1357–60
PERIODATE
Studies on transition-metal oxo and nitrido complexes. Part 9. Periodato and tellurato oxo-ruthenium complexes as organic oxidants. *X*-Ray crystal structure of *trans*-NaK_3[RuO_2(HIO_6)$_2$]·8H_2O, 1983–8
PERMANGANATE
Kinetics of oxidation of uranium(IV) by permanganate ion in aqueous perchlorate media, 601–4
Kinetics and mechanism of oxidation of β-phenylalanine by permanganate ion in aqueous perchloric acid, 605–10
PEROVSKITE
Synthesis and characterization of a new double perovskite: $LaCaMnCoO_6$, 775–80
PEROXIDE
Ammonium fluoroperoxomonophosphate dihydrate [NH_4]$_2$[PO_2(O_2)F]·2H_2O. First chemical synthesis of a fluorinated peroxophosphate, 2005–6
PEROXYBENZOIC ACID
Formation and peroxidatic properties of coprohaem Compound I, 2267–72
PHENANTHROLINE
Pillar chemistry. Part 4. Palladium(II)–2,2′-bipyridyl, –1,10-phenanthroline, and –2,9-dimethyl-1,10-phenanthroline complex pillars in α-zirconium phosphate, 851–8
Significant phosphine ligand effect on the photochemical reactivity of [Cu(N–N)L$_2$]$^+$ (N–N = 1,10-phenanthroline or 2,9-dimethyl-1,10-phenanthroline; L = tertiary phosphine), 1641–4
Kinetic studies of the reduction of nickel oxime complexes by tris(1,10-phenanthroline)cobalt(II) and hydroquinone in aqueous media, 2279–86
PHENANTHROQUINONE
Substituent effects on rhenium and phosphorus hyperfine coupling constants of organometallic rhenium(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 123–8
Electron spin resonance studies of organometallic manganese(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 2695–700
PHENOLATE
Complexes of ligands providing endogenous bridges. Part 6. The *X*-ray crystal structure and magnetic properties of a hexanuclear copper(II) aggregate bearing μ_3-Cu_3(OH) cores supported by 4-nitro-2,6-bis[(salicylideneamino)methyl]-phenolate ligands, 2817–24
PHENYL
Organotin biocides. Part 11. Triphenyltin benzoates: electronic *versus* steric control of structure, 1259–66
Synthesis and *X*-ray crystal structure of a weak molecular adduct of diphenylmercury(II) with 1,2-bis(diphenylphosphino-thioyl)ethane, 1401–4
2-Pyridyl- and quinolin-2-yl-functionalised organyltellurium ligands. The stabilisation of diorganyl tritellurides. The crystal and molecular structures of 2-(2-pyridyl)phenyltellurium(IV) tribromide, dimethyldithiocarbamato[2-(2-pyridyl)phenyl]tellurium(II), and *p*-ethoxyphenyl 2-(2-pyridyl)phenyl telluride, 2363–72
An *X*-ray crystallographic investigation of the structures of pyrazine adducts of diphenyltin dichloride and dimethyltin dichloride, 2621–8
X-Ray crystal and molecular structure of phenyl(triphenylphosphine)mercury(II) nitrate, 2913–4
PHENYLALANINE
Kinetics and mechanism of oxidation of β-phenylalanine by permanganate ion in aqueous perchloric acid, 605–10
PHENYLENEDIOXYDIACETATE
Metal–phenoxyalkanoic acid interactions. Part 28. Crystal and molecular structures of the sodium, ammonium, and magnesium complexes of (*o*-phenylenedioxy)diacetic acid, 2357–62
PHOSPHATE
Pillar chemistry. Part 4. Palladium(II)–2,2′-bipyridyl, –1,10-phenanthroline, and –2,9-dimethyl-1,10-phenanthroline complex pillars in α-zirconium phosphate, 851–8
Thermodynamics of extraction equilibria. Part 7. Solvent extraction of thorium nitrate with tri-n-butyl phosphate, 1813–6
Ammonium fluoroperoxomonophosphate dihydrate [NH_4]$_2$[PO_2(O_2)F]·2H_2O. First chemical synthesis of a fluorinated peroxophosphate, 2005–6
The complexation of iron(III) with sulphate, phosphate, or arsenate ion in sodium nitrate medium at 25 °C, 2015–22
Structure and stability of cyano-derivatives of organochlorophosphate(V) ions, 2077–82
The bis(methylene) metaphosphite, [P(CH_2)$_2$]$^-$, and tris(methylene) metaphosphate, [P(CH_2)$_3$]$^-$, families of anions. An experimental and *ab initio* study, 2837–42
PHOSPHIDE
Stepwise construction of [Os_6(CO)$_{18}$(μ_6-P)]$^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of [Os_6(μ-H)$_2$(CO)$_{20}$(MeCN)(μ_3-PH)] and [PPh_3Me][Os_6(CO)$_{18}$(μ_6-P)], 173–82
Chemistry of phosphido-bridged dimolybdenum complexes. Part 1. High-yield synthesis of [Mo$_2$(η^5-C_5H_5)$_2$(μ-H)(μ-PPh_2)(CO)$_4$] and its reactions with organophosphorus ligands: *X*-ray crystal structure of [Mo$_2$(η^5-C_5H_5)$_2$(μ-H)(μ-PPh_2)(CO)$_3${P(OMe)$_3$}], 1083–8
Stepwise construction of [Os_6(CO)$_{18}$(μ_6-P)]$^-$, a hexanuclear osmium cluster monoanion with trigonal-prismatic co-ordination for phosphorus: *X*-ray crystal structures of [Os_6(μ-H)$_2$(CO)$_{20}$(MeCN)(μ_3-PH)] and [PPh_3Me][Os_6(CO)$_{18}$(μ_6-P)] (**1988, 173**), 1107
Synthesis and characterisation of the tetranuclear phosphinidene clusters [Os_3MH_2(CO)$_{12}$(PR)] (M = Os, R = Ph or cyclo-C_6H_{11} (M = Ru, R = cyclo-C_6H_{11}) and the crystal and

PHOSPHIDE (contd)
molecular structure of $[Os_4(\mu\text{-}H)_2(CO)_{12}(\mu_3\text{-}PC_6H_{11})]$, 1199–204
Tri-, tetra-, penta-, and hexa-nuclear phenylphosphinidene-capped products from the reaction of dodecacarbonyltri-ruthenium with phenylphosphine: crystal structures of $[Ru_4(\mu_4\text{-}PPh)_2(\mu\text{-}CO)(CO)_{10}]$, $[Ru_5(\mu_4\text{-}PPh)\{\mu\text{-}PPh(OPr^n)\}(\mu\text{-}H)(CO)_{13}]$, $[Ru_6(\mu_4\text{-}PPh)_2(\mu_3\text{-}PPh)_2(CO)_{12}]$, and $[Ru_6(\mu_4\text{-}PPh)_3(\mu_3\text{-}PPh)_2(CO)_{12}]$, 1315–30
Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of $[(\eta^5\text{-}C_5H_4)(OC)_2Mo\{\mu\text{-}Ag(PPh_3)\}(\mu\text{-}PPh_2)Mn(CO)_4]$ and $[(\eta\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}I)(\mu\text{-}PPh_2)Mn(CO)_4]$, 1683–8
Synthesis and reactivity of mononuclear molybdenum phosphido complexes, $[Mo(CO)_2\{P(Cl)R\}(\eta\text{-}C_5H_5)]$[R = $CH(SiMe_3)_2$ or $\overline{NCMe_2CH_2CH_2CH_2CMe_2}$]. *X*-Ray crystal structures of $[Mo(CO)_2\{P(X)(\overline{NCMe_2CH_2CH_2CH_2CMe_2})\}(\eta\text{-}C_5H_5)]$ (X = Cl or NMe_2) and $[Mo_2(CO)_4\{\mu\text{-}P_2[CH(SiMe_3)_2]_2\}(\eta\text{-}C_5H_5)_2]$, 2127–34
Diphenylphosphido complexes of the lanthanides: reactions of compounds $[Ln\{N(SiMe_3)_2\}_3]$ (Ln = La or Eu) or $[Ln\{N(SiMe_3)_2\}_3(Ph_3PO)]$ (Ln = La, Eu, or Y) with Ph_2PH to give $[Ln\{N(SiMe_3)_2\}_2(PPh_2)]$ or $[Ln\{N(SiMe_3)_2\}_2(PPh_2)(Ph_3PO)]$, 2211–4
Synthesis and structures of phosphinidene and phosphido complexes of iron and cobalt, 2713–22

PHOSPHINE
Synthesis of Group 1B sandwich cluster compounds with $[Pt_3(\mu\text{-}CO)_3(PPh_3)_3]$ and the structural characterisation of $[M\{Pt_3(\mu\text{-}CO)_3(PPh_3)_3\}_2]PF_6$ (M = Au or Cu) by single-crystal *X*-ray techniques, 335–40
Complexes of functional phosphines. Part 11. β-Ketophosphine complexes of nickel, palladium, and platinum. Crystal structures of *trans*-$[NiX_2(HL)_2]$ [X = Cl or I, HL = $Ph_2PCH_2C(O)Ph$], 353–62
Reactions of phosphine, arsine, and stibine with carbonylbis(triethylphosphine)iridium(I) halides. Part 2. Reactions in dichloromethane, 477–84
Reactivity of ethylenebis(dithiocarbamate) and diethyldithiocarbamate ligands towards phosphine complexes of nickel(II), 537–40
Solid-state structures of platinum–sulphur–nitrogen stacking compounds: $[Pt(S_2N_2)(PMe_2Ph)_2]$, $[Pt(S_2N_2H)(PMe_2Ph)_2]Cl$, $[Pt(S_2N_2H)(PMe_2Ph)_2]PF_6$, and $[Pd(S_2N_2H)(PMe_2Ph)_2]BF_4$, 803–8
Synthesis and characterization of technetium(III) complexes with Schiff-base and phosphine ligands. Molecular structure of (diethylphenylphosphine)[*N*-(2-oxidophenyl)salicylideneiminato-*NOO'*](quinolin-8-olato-*NO*)technetium(III), 847–50
Selective hydrogenation of PhCH=CHCOMe to the unsaturated alcohol catalysed by $[IrH_3(PR_3)_3]$ (R = alkyl or aryl), 947–52
Phosphorus-31 nuclear magnetic resonance studies on ^{15}N-labelled $[Pt(S_2N_2)(PR_3)_2]$ (PR_3 = PMe_3, PEt_3, PPh_3, PMe_2Ph, or $\frac{1}{2}Ph_2PCH_2CH_2PPh_2$), and investigation into its protonation, 1053–8
Reactions of polysulphide with metal–phosphine species. Synthesis and *X*-ray crystal structure of $[\{Ni(bppte)(\mu\text{-}OH)\}_2][ClO_4]_2\cdot(CH_3)_2CO$, 1063–6
Reactions of hexakis(acetonitrile)iron(II) hexafluorophosphate in acetonitrile. Ligation of ammonia, pyridine, and trimethylamine to iron(II) and the behaviour of trimethyl phosphite and trimethylphosphine towards iron(II), nitrogen donor ligand complex cations, 1309–14
Reaction of $[FeCo(CO)_7(\mu\text{-}CH{=}CRH)]$ (R = H or Ph) with dimethylphenylphosphine. Synthesis and structure of $[FeCo(CO)_4(\mu\text{-}CO)(PMe_2Ph)_2(\mu\text{-}CH{=}CH_2)]$, an electronically unbalanced iron–cobalt complex, 1417–20
Cyclic sulphur–nitrogen compounds and phosphorus reagents. Part 2. Reactions of tetrasulphur tetranitride with (morpholino)diphenylphosphine. First observation of the ring contraction of 1,5-$[(OC_4H_8N)Ph_2PN]_2S_4N_4$ to $(OC_4H_8N)Ph_2PNS_3N_3$ in solution, 1445–8
Oxidation and reduction chemistry of bis(η-arene)niobium compounds; the *X*-ray crystal structure of bis(η-toluene)(trimethylphosphine)niobium tetrafluoroborate, 1475–8
Oxidative addition of halogens to $[Pt(S_2N_2H)(PR_3)_2]BF_4$. *X*-Ray crystal structures of $[Pt(S_2N_2H)X(PMe_2Ph)]$ (X = Br or I) and the monoclinic and triclinic polymorphs of $[Pt(S_2N_2H)Br_2(PMe_2Ph)_2]BF_4$, 1569–76
Hydrido-organometallic complexes of platinum(II). *X*-Ray crystal structure of *trans*-$[PtH(C_6H_4F\text{-}p)(PPh_3)_2]$, 1617–22
Significant phosphine ligand effect on the photochemical reactivity of $[Cu(N{-}N)L_2]^+$ (N–N = 1,10-phenanthroline or 2,9-dimethyl-1,10-phenanthroline; L = tertiary phosphine), 1641–4
Homogeneous deuteriation of alkenes using $[RhX(PR_3)_3]$ (X = halide, R = aryl) catalysts, 1653–6
Synthesis and structural characterisation of a novel high-nuclearity gold–tin cluster compound, $[Au_8(PPh_3)_7(SnCl_3)]_2[SnCl_6]$, 1751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)\{\mu\text{-}Ph_2E(CH_2)_nE'Ph_2\}(CO)_{12}]$ (n = 1 or 2, E = E' = As or E = As, E' = P; n = 2, E = E' = P). *X*-Ray crystal structure of $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)(\mu\text{-}Ph_2AsCH_2PPh_2)(CO)_{12}]$, 1795–802
Reactivity of *o*-diphenylphosphinobenzaldehyde toward $[Pt(C_2H_4)(PPh_3)_2]$. *X*-Ray structure of $[Pt(OCC_6H_4PPh_2\text{-}o)H(PPh_3)]\cdot C_6H_6$, 1833–6
Equilibria and kinetics of dissociation of triphenylphosphine from [*N*,*N'*-ethylenebis(salicylideneiminato)]bis(triphenylphosphine)ruthenium(II) in benzene, 2007–8
Kinetics of nucleophilic attack on co-ordinated organic moieties. Part 25. A nucleophilic order for attack upon the $[Fe(CO)_3(1\text{—}5\text{-}\eta\text{-}C_7H_9)]^+$ cation, 2009–14
The co-ordination of small molecules by manganese(II) phosphine complexes. Part 11. The co-ordination of dioxygen by manganese(II) complexes containing long-chain phosphine ligands, 2065–70
Indium(III) halide complexes with trimethylphosphine sulphide and trimethylarsine sulphide: structures and bonding of $[InX_3(Me_3MS)_2]$ (X = Cl or Br, M = P or As) and $[InCl_3(H_2O)(Me_3AsS)_2]$, 2187–92
Diphenylphosphido complexes of the lanthanides: reactions of compounds $[Ln\{N(SiMe_3)_2\}_3]$ (Ln = La or Eu) or $[Ln\{N(SiMe_3)_2\}_3(Ph_3PO)]$ (Ln = La, Eu, or Y) with Ph_2PH to give $[Ln\{N(SiMe_3)_2\}_2(PPh_2)]$ or $[Ln\{N(SiMe_3)_2\}_2(PPh_2)(Ph_3PO)]$, 2211–4
The co-ordination of small molecules by manganese(II) phosphine complexes. Part 14. Some novel mixed tertiary phosphine–t-butyl isocyanide complexes of manganese(II): $[MnBr_2(CNBu^t)(PPhMe_2)]$ and $[Mn(CNBu^t)_4(PR_3)_2]^{2+}$ (PR_3 = $PPhMe_2$, PPh_2Me, $PPhEt_2$, or PPr^n_3), and the *X*-ray crystal structure of bis(dimethylphenylphosphine)tetrakis(t-butyl isocyanide)manganese(II) bis[tribromo(dimethylphenylphosphine oxide)manganate(II)], $[Mn(CNBu^t)_4(PPhMe_2)_2][MnBr_3(OPPhMe_2)]_2$, 2261–6
The triphenylphosphine adduct of a copper(I) complex involving an incompletely bound N_2S_2 macrocyclic ligand, 2301–6
Ruthenium(IV)–oxo complexes: a novel hydrophobic effect of tertiary phosphine ligands on the selective oxidation of alcohols, 2385–92
Dinitrogen complexes of osmium(II) with thiolate co-ligands: *X*-ray structure of *mer*-$[OsCl(SC_6F_5)(N_2)(PMe_2Ph)_3]$, 2393–6
Dinuclear complexes of rhodium and iridium with cyanide or thiocyanate bridges: molecular structure of $[(PMe_2Ph)_3Cl_2Ir(\mu\text{-}CN)IrCl_2(PMe_2Ph)_3][ClO_4]$, 2475–82
Tertiary phosphine complexes of iron porphyrins: synthesis, molecular stereochemistry, and crystal structure of bis(dimethylphenylphosphine)(*meso*-5,10,15,20-tetraphenylporphyrinato)iron(II), 2615–20
Synthesis and spectroscopic properties of the 'mixed' seven-co-ordinate complexes $[MI_2(CO)_3L(L')]$ [M = Mo or W; L,L' = PPh_3, $PPh_2(C_6H_{11})$, $PPh(C_6H_{11})_2$, $AsPh_3$, or $SbPh_3$] and rearrangement of selected $[MI_2(CO)_3L(L')]$ to $[HL][MI_3(CO)_3L']$. *X*-Ray crystal structure of $[PPh_2(C_6H_{11})H][WI_3(CO)_3(SbPh_3)]\cdot Et_2O$, 2729–34
Synthesis and characterization of the novel copper(I) anion $[Cu(PPh_3)Br_2]^-$, 2825–30
X-Ray crystal and molecular structure of phenyl(triphenylphosphine)mercury(II) nitrate, 2913–4
Adducts of trimethylaluminium with phosphine ligands; electronic and steric effects, 3047–50

PHOSPHINE OXIDE
Diphenylphosphido complexes of the lanthanides: reactions of compounds $[Ln\{N(SiMe_3)_2\}_3]$ (Ln = La or Eu) or $[Ln\{N(SiMe_3)_2\}_3(Ph_3PO)]$ (Ln = La, Eu, or Y) with Ph_2PH to give $[Ln\{N(SiMe_3)_2\}_2(PPh_2)]$ or $[Ln\{N(SiMe_3)_2\}_2(PPh_2)(Ph_3PO)]$, 2211–4
PHOSPHINIDENE
Synthesis, characterisation, and catalytic activity of a phosphinidene stabilised tethered triruthenium cluster, 2649–54
Synthesis and structures of phosphinidene and phosphido complexes of iron and cobalt, 2713–22
PHOSPHINO
Pentamethylcyclopentadienylrhodaborane chemistry. Part 4. The isolation, molecular structure, and nuclear magnetic resonance study of an interesting phosphino-bridged *arachno*-type nine-vertex rhodaborane [2,5-(μ-PPh_2)-1-($PHPh_2$)-2-(η^5-C_5Me_5)-2-RhB_8H_9], 2059–64
PHOSPHITE
Preparation, *X*-ray structural analysis, and method of interconversion of two isomeric forms of $[Os_6(CO)_{16}\{P(OMe)_3\}_2]$, 1205–12
Reactions of hexakis(acetonitrile)iron(II) hexafluorophosphate in acetonitrile. Ligation of ammonia, pyridine, and trimethylamine to iron(II) and the behaviour of trimethyl phosphite and trimethylphosphine towards iron(II), nitrogen donor ligand complex cations, 1309–14
The oxidative isomerisation of *cis,cis*-dicarbonylmanganese(I) derivatives; isolation of the resulting *trans*-dicarbonylmanganese(II) complexes and the *X*-ray structure of *cis,cis*-$[MnBr(CO)_2\{P(OPh)_3\}(Ph_2PCH_2PPh_2)]$, 1623–30
Kinetics of nucleophilic attack on co-ordinated organic moieties. Part 25. A nucleophilic order for attack upon the $[Fe(CO)_3(1—5\text{-}\eta\text{-}C_7H_9)]^+$ cation, 2009–14
Co-ordination: kinetics of some aliphatic amines towards the photogenerated transient '$CoH\{PPh(OEt)_2\}_3$', 2675–6
The bis(methylene) metaphosphite, $[P(CH_2)_2]^-$, and tris(methylene) metaphosphate, $[P(CH_2)_3]^-$, families of anions. An experimental and *ab initio* study, 2837–42
PHOSPHONIUM
Tetra-arylfluorophosphoranes, 277–80
PHOSPHORANE
Tetra-arylfluorophosphoranes, 277–80
PHOSPHOROTETRATHIOATE
Scrambling of P–SP and P–SC bonds between tetraphosphorus decasulphide and phosphorotetrathioic esters, 2221–4
PHOSPHORUS
Ionization energies and thermal fragmentation patterns of gaseous cyclopoly-arsanes and -phosphanes E_nR_n (E = As or P; R = Me, Bu^t, or CF_3; n = 3—5): a joint temperature-variable field ionization mass spectrometric and ultraviolet photoelectron spectroscopic study, 195–200
Tetra-arylfluorophosphoranes, 277–80
Reaction of the lithium enolate of acetaldehyde, $Li(OCH{=}CH_2)$, with cyclothiaphosphazenes, 1099–102
Phosphorus–nitrogen compounds. Part 54. The reactions of geminal $N_3P_3(NH_2)_2Cl_4$ and of $N_3P_3(NH_2)Cl_5$ with alkoxide ions in alcohols. The geminal $\equiv P(NH_2)_2$ to non-geminal $\equiv P(NH_2)(OR)$ rearrangement. The crystal structures of *trans*-$N_3P_3(NH_2)_2(OPr^n)_4$, *cis*-$N_3P_3(NH_2)_2(OMe)_4$, and geminal $N_3P_3(NH_2)_2(OMe)_4$, 1169–78
Synthesis and nuclear magnetic resonance spectroscopy of geometrical isomers of 1,3,5-trimethyl-2,4,6-tris(*p*-methylphenoxy)-2,4,6-trioxocyclotriphosphazane: *X*-ray crystal structure of the *trans* isomer, 1371–6
Crystal structure of 2,2,4,4-tetrachloro-6,6-bis(trimethylsilylamino)cyclotriphosphazene, $N_3P_3Cl_4(NHSiMe_3)_2$, 1405–8
Phosphorus–nitrogen compounds. Part 55. The reactions of 2,2,4,4-tetrachloro-6,6-diphenylcyclotriphosphazatriene with aliphatic difunctional alcohols, amines, and aminoalcohols. Proton and phosphorus-31 nuclear magnetic resonance spectroscopic studies of the products, 1757–64
Ammonium fluoroperoxomonophosphate dihydrate $[NH_4]_2[PO_2(O_2)F]\cdot 2H_2O$. First chemical synthesis of a fluorinated peroxophosphate, 2005–6
Phosphorus-31 and selenium-77 nuclear magnetic resonance spectra of tetraphosphorus triselenide, 2055–8
Structure and stability of cyano-derivatives of organochlorophosphate(V) ions, 2077–82
Scrambling of P–SP and P–SC bonds between tetraphosphorus decasulphide and phosphorotetrathioic esters, 2221–4
Crystal structure of 2,4-bis(phenylthio)-1,3-dithia-2λ^5,4λ^5-diphosphetane 2,4-disulphide, 2225–6
Phosphorus–nitrogen compounds. Part 56. The solution synthesis of some *trans*-1,3-dialkyl-2,4-diphenyl-2,4-dithiocyclodi-λ^5-phosphazanes and their proton, carbon-13, and phosphorus-31 nuclear magnetic resonance spectra, 2591–6
Phosphorus-31 and carbon-13 nuclear magnetic resonance studies of unsymmetrical tetra-alkyldiphosphanes $R^1R^2PPMe_2$ and $R^1R^2PPEt_2$, 2775–80
The bis(methylene) metaphosphite, $[P(CH_2)_2]^-$, and tris(methylene) metaphosphate, $[P(CH_2)_3]^-$, families of anions. An experimental and *ab initio* study, 2837–42
PHOSPHORUS-31
Complexes of 1,1,2-tris(diphenylphosphino)ethane with Group 6 metal carbonyls, 503–8
Phosphorus-31 nuclear magnetic resonance studies on ^{15}N-labelled $[Pt(S_2N_2)(PR_3)_2]$ (PR_3 = PMe_3, PEt_3, PPh_3, PMe_2Ph, or $\frac{1}{2}Ph_2PCH_2CH_2PPh_2$), and investigation into its protonation, 1053–8
PHOTOCHEMISTRY
Photocatalytic dimerization of olefins by decatungstate(VI), $[W_{10}O_{32}]^{4-}$, in acetonitrile and magnetic resonance studies of photoreduced species, 183–90
Electron spin resonance studies of the solution photochemistry of octacyanotungstate(V) ions at 77 and 293 K, 285–92
Production of binary oxides by photolysis of $M(CO)_6$ molecules (M = Cr, Mo, or W) isolated in O_2-doped argon matrices, 809–18
The photochemistry of cyclopentadienyl platinum carbonyl dimers: characterization of $[Pt_2(\mu\text{-}CO)(\eta^5\text{-}C_5R_5)_2]$ (R = H or Me) using matrix isolation and fast time-resolved infrared spectroscopy, 1501–8
Significant phosphine ligand effect on the photochemical reactivity of $[Cu(N{-}N)L_2]^+$ (N–N = 1,10-phenanthroline or 2,9-dimethyl-1,10-phenanthroline; L = tertiary phosphine), 1641–4
Photochemical and photocatalytic behaviour of 'flyover-bridge' complexes, 2519–24
Co-ordination kinetics of some aliphatic amines towards the photogenerated transient '$CoH\{PPh(OEt)_2\}_3$', 2675–6
Redox reactions of osmium porphyrins, 2705–12
PHOTOELECTRON
Synthesis and characterization of Ti_5Te_4-type molybdenum cluster compounds, $A_xMo_5As_4$ (A = Cu, Al, or Ga), 1–6
Ionization energies and thermal fragmentation patterns of gaseous cyclopoly-arsanes and -phosphanes E_nR_n (E = As or P; R = Me, Bu^t, or CF_3; n = 3—5): a joint temperature-variable field ionization mass spectrometric and ultraviolet photoelectron spectroscopic study, 195–200
X-Ray photoelectron diffraction studies of the micas lepidolite and biotite, 859–80
Chemical reaction of metallic copper with imidazole, 1487–8
Photoelectron spectroscopic studies of the electronic structure of some silatranes, 1963–8
Photoelectron spectra of sulphidoborons XBS where X = H, F, Cl, or Br, 2041–6
X-Ray crystal structure of (2,2′-bipyrimidine)[1,2-dicyanoethylene-1,2-dithiolato(2−)]platinum(II)–*N*,*N*-dimethylformamide and properties of PtS_2N_2-type complexes, 2215–20
PHOTOLYSIS
Formation of molecular chromium(IV) oxide (CrO_2) by photolysis of $Cr(CO)_6$ in O_2-doped argon matrices, 2255–60
PHTHALAZINE
Template reactions of 1,4-bis(α-carboxybenzylidenehydrazino)phthalazine with cobalt(II), nickel(II), and chromium(III), 2293–6
PHTHALOCYANINATE
Association and orientation of copper(II) tetra-t-butylphthalocyaninate in multilayer Langmuir–Blodgett films as determined by electron paramagnetic resonance spectroscopy, 1583–90
PHTHALOCYANINE
Synthesis and characterization of metal-free and metal derivatives of a novel soluble crown-ether-containing phthalocyanine, 401–6
Octabutoxyphthalocyanine, a new electron donor, 549–52

PIPERAZINE
Preparation and properties of piperazine silicate (EU-19) and a silica polymorph (EU-20), 2513–8
PLATINUM
Reactions of acetylenes with noble metal carbonyl halides. Part 10. Synthesis and *X*-ray structural characterization of a new substituted diplatina-dioxapentalene complex $[Cl(CO)Pt\{CMe{=}C(CO\overline{OMe})C(=O)\}PtCl(PPh_3)]$, 17–22
Neutral chain bromide- and iodide-bridged platinum(II,IV) complexes of 1,2-diaminoethane and thiocyanate: synthesis, electronic, infrared, Raman, and resonance-Raman studies, 73–8
Synthesis of Group 1B sandwich cluster compounds with $[Pt_3(\mu\text{-}CO)_3(PPh_3)_3]$ and the structural characterisation of $[M\{Pt_3(\mu\text{-}CO)_3(PPh_3)_3\}_2]PF_6$ (M = Au or Cu) by single-crystal *X*-ray techniques, 335–40
Complexes of functional phosphines. Part 11. β-Ketophosphine complexes of nickel, palladium, and platinum. Crystal structures of *trans*-$[NiX_2(HL)_2]$ [X = Cl or I, HL = $Ph_2PCH_2C(O)Ph$], 353–62
Chemistry of metallacyclobutanones. Part 4. The synthesis of 1,3-diphenyl-substituted oxodimethylenemethane complexes of platinum(II) and palladium(II) *via* the dianion $[PhCHC(O)CHPh]^{2-}$, and the *X*-ray crystal structure of $[Pt\{\eta^3\text{-}CHPhC(O)CHPh\}(AsPh_3)_2]\cdot 2CH_2Cl_2$, 427–32
Stereochemical non-rigidity of dithioether complexes of trimethylplatinum(IV) halides. *X*-Ray crystal structures of $[PtClMe_3(MeSCH_2CH_2SEt)]$ and $[PtIMe_3(MeSCH_2CH_2SBu^t)]$, 521–32
Reactivity and mechanism in the oxidative addition of iodoalkanes and di-iodoalkanes to a dimethylplatinum(II) complex, 595–600
Organo–platinum–iron complexes containing one bridging $Ph_2PCH_2PPh_2$ ligand. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CO)Pt(PPh_3)]$, $[(OC)_2Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)C_2H_3\}Pt(PPh_3)]$, and $[(OC)_3Fe(\mu\text{-}dppm)(\mu\text{-}CMe{=}CH_2)\text{-}Pt(PPh_3)][BF_4]$, 741–50
Bimetallic complexes of platinum, rhodium, or copper bridged by $Ph_2PCH_2PPh_2$ or $Ph_2PC(=CH_2)PPh_2$ to diazenidorhenium groups; crystal structure of $[(4\text{-}MeC_6H_4N_2)ClRe(\mu\text{-}dppm)_2(\mu\text{-}CO)PtCl]\cdot 2Me_2CO$, 769–74
Solid-state structures of platinum–sulphur–nitrogen stacking compounds: $[Pt(S_2N_2)(PMe_2Ph)_2]$, $[Pt(S_2N_2H)(PMe_2Ph)_2]Cl$, $[Pt(S_2N_2H)(PMe_2Ph)_2]PF_6$, and $[Pd(S_2N_2H)(PMe_2Ph)_2]BF_4$, 803–8
Trifluoromethanesulphonato-*O* complexes of platinum(II) and palladium(II), 931–4
Acid- and base-catalysed displacement of the carboxylate ligand from $[Pt(dien)(RCO_2)]^+$ (dien = 1,5-diamino-3-azapentane; R = CH_2Cl, $CHCl_2$, or CCl_3) in aqueous solution, 1049–52
Phosphorus-31 nuclear magnetic resonance studies on ^{15}N-labelled $[Pt(S_2N_2)(PR_3)_2]$ (PR_3 = PMe_3, PEt_3, PPh_3, PMe_2Ph, or $\frac{1}{2}Ph_2PCH_2CH_2PPh_2$), and investigation into its protonation, 1053–8
Amine, imine, and aminocarbene complexes of platinum(II), 1147–52
Organo–platinum–iron complexes derived from allenes. Crystal structures of $[(OC)_3Fe(\mu\text{-}dppm)\{\mu\text{-}C(O)CH_2C(=CH_2)\}Pt(PPh_3)]$, $[(OC)_3Fe(\mu\text{-}dppm)\{\mu\text{-}C(=CH_2)CH_2\}Pt(PPh_3)]$, and $[(OC)_2Fe(\mu\text{-}dppm)\{\eta^4\text{-}(CH_2)(CMe_2)CPt\text{-}(PPh_3)\}]$, 1185–92
Facilitation of the substitution reactions of triangular platinum cluster compounds and the structural characterisations of $[Pt_3(\mu\text{-}SO_2)_3\{P(C_6H_{11})_3\}_3]$ and $[NEt_4][Pt_3(\mu\text{-}Br)(\mu\text{-}SO_2)_2\{P(C_6H_{11})_3\}_3]$ by single-crystal *X*-ray techniques, 1461–6
The photochemistry of cyclopentadienyl platinum carbonyl dimers: characterization of $[Pt_2(\mu\text{-}CO)(\eta^5\text{-}C_5R_5)_2]$ (R = H or Me) using matrix isolation and fast time-resolved infrared spectroscopy, 1501–8
Synthesis and structural characterisation of some *triangulo*- and binuclear clusters of platinum from the reaction of $[Pt_3(\mu\text{-}SO_2)_3\{P(C_6H_{11})_3\}_3]$ with 2,6-xylyl isocyanide, 1509–16
Oxidative addition of halogens to $[Pt(S_2N_2H)(PR_3)_2]BF_4$. *X*-Ray crystal structures of $[Pt(S_2N_2H)X(PMe_2Ph)]$ (X = Br or I) and the monoclinic and triclinic polymorphs of $[Pt(S_2N_2H)Br_2(PMe_2Ph)_2]BF_4$, 1569–76
A kinetic investigation on the oxidation of platinum(II) complexes by hexachloroiridate(IV). Role of steric hindrance, 1577–82
Hydrido-organometallic complexes of platinum(II). *X*-Ray crystal structure of *trans*-$[PtH(C_6H_4F\text{-}p)(PPh_3)_2]$, 1617–22
A study of the generality of the reaction of diazomethane with halogenoplatinum(II) complexes in the preparation of (halogenomethyl)platinum(II) complexes, 1773–80
Functionalized isocyanides as ligands. Part 5. Syntheses and reactions of 3-(benzylphosphonio)indolin-2-ylidene complexes of platinum(II). *X*-Ray crystal structure of *trans*-$[Pt\{o\text{-}\overline{CN(H)C_6H_4C}[P(CH_2Ph)_2Ph]\}X(PPh_3)_2]BF_4\cdot 2C_2H_4Cl_2$ (X = Cl or Br), 1803–12
Reactivity of *o*-diphenylphosphinobenzaldehyde toward $[Pt(C_2H_4)(PPh_3)_2]$. *X*-Ray structure of $[Pt(OCC_6H_4PPh_2\text{-}o)H(PPh_3)]\cdot C_6H_6$, 1833–6
Reactions of acetylenes with noble metal carbonyl halides. Part 11. Synthesis of $[Pt\{\overline{CMe{=}C(H)COOMe}\}(CO)Cl]$ *via* polynuclear platinum carbonyls. *X*-Ray crystal structure determination of the σ-alkenyl platinum complex $[N(PPh_3)_2][Pt\{CMe{=}C(H)CO_2Me\}(CO)Cl_2]$, 1949–56
Synthesis of new heteronuclear complexes with bridging carbyne ligands between tungsten and gold. *X*-Ray crystal structure of $[AuW(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_2(bipy)(C_6F_5)Br]$, 1957–62
Kinetics of the displacement of cyclobutane-1,1-dicarboxylate from diammine(cyclobutane-1,1-dicarboxylato)-platinum(II) in aqueous solution, 2135–40
X-Ray crystal structure of (2,2′-bipyrimidine)[1,2-dicyanoethylene-1,2-dithiolato(2−)]platinum(II)–*N*,*N*-dimethylformamide and properties of PtS_2N_2-type complexes, 2215–20
Ring expansion in dimetallacycle chemistry: preparation of a dimetallacyclopentanol from a dimetallacyclobutane, 2235–8
Nucleophilic discrimination and the *trans* effect. The kinetics of displacement of X from *trans*-$[Pt(L)(X)Cl_2]^{n-}$ (L = Me_2SO, Et_2S, PMe_3, PEt_3, PPh_3, or $AsEt_3$; X = Cl, n = 1; X = MeOH, n = 0) by neutral and anionic nucleophiles, 2347–52
Metallaheteroborane chemistry. Part 3. Synthesis of $[2,2\text{-}(PR_3)_2\text{-}1,2\text{-}TePtB_{10}H_{10}]$ (R_3 = Et_3, Bu^n_3, or Me_2Ph), their characterisation by nuclear magnetic resonance spectroscopy, and the crystal and molecular structure of $[2,2\text{-}(PEt_3)_2\text{-}1,2\text{-}TePtB_{10}H_{10}]$, 2555–64
Synthesis of heterobimetallic complexes containing cobalt–platinum or rhodium–platinum dative bonds. Molecular structure of $[(\eta^5\text{-}C_5H_5)(CO)_2Rh{\rightarrow}Pt(C_6F_5)_2(CO)]$, 3005–10
Nucleophilic (Michael) additions to $(Ph_2P)_2C{=}CH_2$ when chelated to dimethylplatinum(II), di(*o*-tolyl)platinum(II), or iodo(trimethyl)platinum(IV). Crystal structure of $[PtMe_3I\{(\overline{PPh_2})CH(PPh_2)CH_2\overline{NHCH_2Ph}\}]$, 3011–6
POLYMER
Tetragonal co-ordination polymers of rhodium(I) with stereochemically rigid aryl di-isocyanide linkages, 469–76
Silver(I)–phenoxyalkanoates. The crystal and molecular structures of polymeric [(4-chloro-2-methylphenoxy)ethano-ato-*O*,*O*′]silver(I), [(2,4-dichlorophenoxy)ethanoato-*O*,*O*′]silver(I), and di-μ-[(2-chlorophenoxy)ethanoato-*O*,*O*′]disilver(I)–silver(I) perchlorate (1/1), 2353–6
POLYMERIZATION
Reaction of the lithium enolate of acetaldehyde, $Li(OCH{=}CH_2)$, with cyclothiaphosphazenes, 1099–102
POLYSULPHIDE
Reactions of polysulphide with metal–phosphine species. Synthesis and *X*-ray crystal structure of $[\{Ni(bppte)(\mu\text{-}OH)\}_2][ClO_4]_2\cdot(CH_3)_2CO$, 1063–6
PORPHYRIN
Synthesis and electrode reactions of difluorogermanium(IV) porphyrins. Molecular stereochemistry and crystal structure of difluoro(2,3,7,8,12,13,17,18-octaethylporphyrinato)germanium(IV), 1109–14
PORPHYRINATE
Synthesis and characterization of diazido–germanium(IV) and -tin(IV) porphyrins. Crystal structure of diazido(5,10,15,20-tetra-*p*-tolylporphyrinato)germanium(IV), 1921–6
Formation and peroxidatic properties of coprohaem Compound I, 2267–72
Kinetics of the decomposition of coprohaem Compound I in aqueous solution, 2273–8
Synthesis and characterization of bis(phenyltetrazolato)-germanium(IV) and -tin(IV) porphyrins, 2569–72

PORPHYRINATE (contd)
Tertiary phosphine complexes of iron porphyrins: synthesis, molecular stereochemistry, and crystal structure of bis(dimethylphenylphosphine)(*meso*-5,10,15,20-tetraphenylporphyrinato)iron(II), 2615–20
Intermolecular dimerisation of copper porphyrins and their radical cations. An electron spin resonance study, 2681–2
Redox reactions of osmium porphyrins, 2705–12
Proton nuclear magnetic resonance studies on haemin chloride in pyridine–water solution, 2797–802
PROPANEDIYL
Chemistry of metallacyclobutanones. Part 4. The synthesis of 1,3-diphenyl-substituted oxodimethylenemethane complexes of platinum(II) and palladium(II) *via* the dianion $[PhCHC(O)CHPh]^{2-}$, and the *X*-ray crystal structure of $[Pt\{\eta^3\text{-}CHPhC(O)CHPh\}(AsPh_3)_2]\cdot 2CH_2Cl_2$, 427–32
PROTEIN
Preparation, characterisation, and intramolecular electron-transfer studies on the penta-ammineruthenium histidine-modified high-potential iron–sulphur protein from *Chromatium vinosum*, 2843–50
PYRANONATE
A potential iron pharmaceutical composition for the treatment of iron-deficiency anaemia. The crystal and molecular structure of *mer*-tris-(3-hydroxy-2-methyl-4*H*-pyran-4-onato)iron(III), 1159–64
PYRAZINE
An *X*-ray crystallographic investigation of the structures of pyrazine adducts of diphenyltin dichloride and dimethyltin dichloride, 2621–8
PYRAZOLATE
Binuclear nickel(II) and copper(II) complexes containing an endogenous alkanethiolato-bridging sulphur atom and exogenous μ-pyrazolate (pz) group. Crystal structure of $[Ni_2L(pz)]$ [L = *NN*′-3-mercaptopentane-1,5-diylbis(salicylideneiminate)(3−)], 1823–6
Dicopper(II) complexes of a binucleating N_4 macrocycle containing mono- and di-atomic bridges; magnetic interactions mediated by alkoxo- and diaza-bridging ligands. Crystal structures of $[Cu_2(L^1)(pz)][ClO_4]^2$, $[Cu_2(L^1)(OEt)(NCS)_2]$, and $[Cu_2(L^1)(OMe)_2(MeCN)_2][BPh_4]_2$, 2995–3004
PYRAZOLE
The chemistry of dinitrogen residues. Part 5. [Tris(pyrazolyl)borato]-complexes of titanium(III); the crystal structures of trimethylhydrazinium trichloro[tris(3,5-dimethylpyrazolyl)borato]titanate(III) and dichloro(3,5-dimethylpyrazole)-[tris(3,5-dimethylpyrazolyl)borato]titanium(III), 1153–8
PYRAZOLYLBORATE
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 72. Di- and tri-metal compounds prepared from the alkylidyne tungsten complexes $[W(\equiv CR)(CO)_3\{H_2B(pz)_2\}]$ [R = C_6H_4Me-4 or Me, $H_2B(pz)_2$ = dihydrobis(pyrazol-1-yl)borate], 1139–46
The chemistry of dinitrogen residues. Part 5. [Tris(pyrazolyl)borato]-complexes of titanium(III); the crystal structures of trimethylhydrazinium trichloro[tris(3,5-dimethylpyrazolyl)borato]titanate(III) and dichloro(3,5-dimethylpyrazole)-[tris(3,5-dimethylpyrazolyl)borato]titanium(III), 1153–8
PYRENE
Synthesis and structural characterization of the molecular complex between bismuth trichloride and pyrene, 191–4
PYRIDAZINE
Dicopper(I) complexes containing intramolecular 1,2-diaza bridging ligands. Behaviour of the dicopper site in the dehydrogenation of hydrazobenzene. Crystal structure of $[Cu_2L^2(pydz)_2][ClO_4]_2$, 347–52
PYRIDAZINYL
Iridium(III) *cis*-dihydrido complexes with 3,6-bis(2′-pyridyl)pyridazine. Crystal structure of the pyridazinyl complex $[\{IrH_2(PPh_3)_2\}_2\{\mu\text{-}C_4HN_2(C_5H_4N)_2\text{-}3,6\}]PF_6$, 651–6
PYRIDINE
Rhodium(III) complexes with pyridine-2-thiol (pySH) and pyridine-2-thiolato (pyS) as the only ligands: crystal structures of *mer*-$[Rh(pyS)_3]$, $[Rh(pyS)_2(pySH)_2]Cl\cdot 0.5H_2O$, and $[Rh(pyS)_3(pySH)]$, 227–34
$[RhPd_2(pyS)_4(\eta^3\text{-}C_4H_7)_2][BF_4]$: Synthesis and *X*-ray structure of a mixed-metal trinuclear complex containing two μ_3-pyridine-2-thionato (pyS) ligands, 235–8
Metallation of aliphatic carbon atoms. Part 5. Synthesis and characterization of the cyclopalladated complexes of 2-(trimethylsilyl)pyridine and their dynamic behaviour observed by proton nuclear magnetic resonance spectroscopy, 785–90
Lewis-base adducts of main Group 1 metal compounds. Part 3. Synthesis and structural systematics of $[LiXL_3]$ and $[L'_2LiX_2LiL'_2]$ systems (X = Cl, Br, or I; L = 3,5-$Me_2C_5H_3N$, L′ = 2-MeC_5H_4N), 991–6
Copper(II) and zinc(II) co-ordination compounds of tridentate bis(benzimidazole)pyridine ligands. Crystal and molecular structures of bis[2,6-bis(1′-methylbenzimidazol-2′-yl)pyridine]copper(II) diperchlorate monohydrate and (acetonitrile)[2,6-bis(benzimidazol-2′-yl)pyridine](perchlorato)copper(II) perchlorate, 1429–36
Synthesis and characterization of pentagonal-bipyramidal mercury(II) complexes with 2,6-diacetylpyridine bis(2′-pyridylhydrazone). *X*-Ray structure of [2,6-diacetylpyridine bis(2′-pyridylhydrazone)]mercury(II) tetrachloro-mercurate(II), 1479–86
cis-Bis(2,2′-bipyridine)bis(pyridine)ruthenium(II) salts: a spectroscopic and structural study, 1837–42
Copper(II)-assisted hydrolysis of 2,4,6-tris(2-pyridyl)-1,3,5-triazine. Part 1. Crystal structures of [bis(2-pyridylcarbonyl)amido](2-pyridylformamide)copper(II) perchlorate monohydrate and [bis(2-pyridylcarbonyl)amido]copper(II) perchlorate, 2033–40
Heterocyclic *N*-oxide ligands: a thermochemical study of adducts with zinc, cadmium, and mercury chlorides, 2113–6
Di- and tri-nuclear complexes of palladium(II) containing doubly- and triply-bridging pyridine-2-thionato (pyS) ligands: crystal structure of $[Pd_3(C_6H_4CH_2NMe_2)_3(pyS)_2][BF_4]$, 2193–200
Electrophilic behaviour of nitrosyls: the reactions of ketones with nitrosyls and the crystal and molecular structure of the product of the reaction between *trans*-chloro(nitrosyl)tetra(pyridine)ruthenium and acetone, 2965–70
Crystal structures and magnetic properties of the mono-μ-halogeno-bridged copper(II) chains Cu(pcpci)X [pcpci = *N*-(2′-pyridylcarbonyl)pyridine-2-carboximidate, X = Cl or Br], 3041–6
PYRIDINECARBALDIMINE
X-Ray crystal structure of (2,2′-bipyrimidine)[1,2-dicyanoethylene-1,2-dithiolato(2−)]platinum(II)–*N*,*N*-dimethylformamide and properties of PtS_2N_2-type complexes, 2215–20
PYRIDYL
2-Pyridyl- and quinolin-2-yl-functionalised organyltellurium ligands. The stabilisation of diorganyl tritellurides. The crystal and molecular structures of 2-(2-pyridyl)phenyltellurium(IV) tribromide, dimethyldithiocarbamato[2-(2-pyridyl)phenyl]tellurium(II), and *p*-ethoxyphenyl 2-(2-pyridyl)phenyl telluride, 2363–72
PYROLYSIS
Ionization energies and thermal fragmentation patterns of gaseous cyclopoly-arsanes and -phosphanes E_nR_n (E = As or P; R = Me, Bu^t, or CF_3; *n* = 3—5): a joint temperature-variable field ionization mass spectrometric and ultraviolet photoelectron spectroscopic study, 195–200
PYROPHOSPHATE
Surface acidity of the layered pyrophosphates of quadrivalent Ti, Zr, Ge, and Sn and their activity in some acid-catalysed reactions, 881–6
QUINOLINOLATE
A reactive and versatile fourteen-electron copper(I) fragment for binding carbon monoxide, isocyanides, and phosphines: synthesis, crystal structure, and reactivity of (2-methylquinolin-8-olato)copper(I) derivatives, 1607–16
QUINOLINYL
2-Pyridyl- and quinolin-2-yl-functionalised organyltellurium ligands. The stabilisation of diorganyl tritellurides. The crystal and molecular structures of 2-(2-pyridyl)phenyltellurium(IV) tribromide, dimethyldithiocarbamato[2-(2-pyridyl)phenyl]tellurium(II), and *p*-ethoxyphenyl 2-(2-pyridyl)phenyl telluride, 2363–72
QUINQUEPYRIDINE
Molecular helicity in inorganic complexes; double helical binuclear complexes of 2,2′:6′,2″:6″,2‴:6‴,2⁗-quinquepyridine (L): crystal structures of $[Cu_2L_2(O_2CMe)][PF_6]_3\cdot H_2O$ and $[Cu_2L_2][PF_6]_3\cdot 2MeCN$, 2655–62
RADICAL
Substituent effects on rhenium and phosphorus hyperfine coupling

RADICAL (contd)
constants of organometallic rhenium(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 123–8
Kinetics of the reaction between hypochlorous acid and hexacyanoferrate(II) ion in aqueous solution, 273–6
Electron spin resonance studies of organometallic manganese(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 2695–700

RAMAN
Neutral chain bromide- and iodide-bridged platinum(II,IV) complexes of 1,2-diaminoethane and thiocyanate: synthesis, electronic, infrared, Raman, and resonance-Raman studies, 73–8
Electrochemical and spectroscopic studies on tetranuclear $[\{Re(\mu_3\text{-}X)(CO)_3\}_4]$ (X = Cl, Br, or I) and acetonitrile complexes derived therefrom, 245–8
Raman spectra of some transition-metal imido complexes, 647–50
Infrared, Raman, and resonance-Raman spectra of $[Mo_2(O_2CCH_3)_4]$ and $[Mo_2(O_2CCD_3)_4]$, 973–82
Resonance-Raman spectra of nitro cobalt(III) complexes: $K_3[Co(NO_2)_6]$, $Na_3[Co(NO_2)_6]$, *trans*-$[NH_4][Co(NO_2)_4(NH_3)_2]$, and *trans*-$[Co(NO_2)_2(NH_3)_4]NO_3$, 1827–32
Infrared, resonance-Raman, and excitation profile studies of $[Os_2(O_2CCH_2Cl)_4Cl_2]$, $[Os_2(O_2CC_2H_5)_4Cl_2]$, and $[Os_2(O_2CC_3H_7)_4Cl_2]$: assignment of osmium–osmium, osmium–oxygen, and osmium–chlorine stretching vibrations, 2601–6

RARE EARTH METAL
The chemistry in air of the rare-earth-metal sesquioxides. Comparative study of hexagonal and cubic neodymia samples, 1765–72

REDOX POTENTIAL
Dinuclear metal complexes. Part 8. Effect of remote substituents on the redox potentials of mono- and di-nuclear copper(II) complexes, 935–42
Synthesis and properties of pentachloro(ligand)iridate(IV) anions $[IrLCl_5]^-$ (L = pyridine, PPh_3, $AsPh_3$, $SbPh_3$, SMe_2, SPh_2, or $SeMe_2$), 2677–80

RHENIUM
Substituent effects on rhenium and phosphorus hyperfine coupling constants of organometallic rhenium(0) radicals spin trapped by 9,10-phenanthroquinone and its derivatives, 123–8
triangulo-Trirhenium(III) alkyl compounds. The *X*-ray crystal structures of $Re_3(\mu\text{-}Cl)_{1.5}(\mu\text{-}Me)_{1.5}(CH_2Ph)_6$ and $Re_3(\mu\text{-}Me)_3(CH_2Ph)_6$, 219–26
Electrochemical and spectroscopic studies on tetranuclear $[\{Re(\mu_3\text{-}X)(CO)_3\}_4]$ (X = Cl, Br, or I) and acetonitrile complexes derived therefrom, 245–8
Technetium(V) and rhenium(V) complexes with Schiff-base ligands containing the ONNNO donor atom set. Crystal structure of [*N*,*N*′-3-azapentane-1,5-diylbis(salicylideneiminato)(3−)-*O*,*O*′,*N*,*N*′,*N*″]oxotechnetium(V), 611–6
Synthesis of homoleptic tetrahedral aryls of rhenium(IV) and ruthenium(IV). *X*-Ray crystal structures of tetrakis(*o*-methylphenyl)rhenium(IV) tetrakis(*o*-methylphenyl)oxorhenium(VI), and tetrakis(*o*-methylphenyl)ruthenium(IV), 669–74
Bimetallic complexes of platinum, rhodium, or copper bridged by $Ph_2PCH_2PPh_2$ or $Ph_2PC(=CH_2)PPh_2$ to diazenidorhenium groups; crystal structure of $[(4\text{-}MeC_6H_4N_2)ClRe(\mu\text{-}dppm)_2(\mu\text{-}CO)PtCl]\cdot 2Me_2CO$, 769–74
Reductive nitrosylation of tetraoxometallates. Part 14. Generation and proton induced disproportionation of the $Re(NO)^{3+}$ moiety. Synthesis, characterisation, and electrochemistry of novel hydroxo- and halogeno-nitrosyl complexes of rhenium, 793–802
Reactivity of rhenium(I) pseudo-allyl complexes with heterocumulenes. Part 2. Insertion reactions. Crystal structures of the thiazolyl-thioureido and -dithiocarbamato complexes $[Re(CO)_2(PPh_3)_2\{SC(NPh)NMe(C_3H_2NS)\}]\cdot CH_2Cl_2$ and $[Re(CO)_2(PPh_3)_2\{S_2CNMe(C_3H_2NS)\}]\cdot CH_2Cl_2$ (C_3H_2NS = thiazol-2-yl), 899–904
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 70. Tetranuclear metal compounds with rhenium–molybdenum or –tungsten bonds. Crystal structures of $[Mo_2Re_2(\mu_3\text{-}CC_6H_4Me\text{-}4)_2(\mu\text{-}CO)_2(CO)_7(\eta\text{-}C_5H_5)_2]\cdot 1.5CH_2Cl_2$ and $[W_2Re_2(\mu\text{-}H)(\mu_3\text{-}\sigma\text{:}\sigma'\text{:}\eta^2\text{-}C{=}CH_2)(\mu_3\text{-}CMe)(\mu\text{-}CO)(CO)_8(\eta\text{-}C_5H_5)_2]$, 1121–30
X-Ray crystal structures of two isomers of the hydrido–carbonyl anion $[Re_7(\mu\text{-}H)C(CO)_{21}]^{2-}$. The problematic existence of triply bridging hydrides in clusters containing interstitial main-group elements, 1281–8
Mixed rhenium–gold polyhydrides that contain ReAu and $ReAu_2$ cores, 1701–4
The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 1. Reactivity of mixed carbonyl(formamido)(phosphine)rhenium(I) complexes with RNCS (R = Ph or *p*-MeC_6H_4) and PhNCO. Crystal structure of the thiazetidine rhenium(I) complex $[Re(CO)_2(PPh_3)_2\{PhN{=}C(OEt)\text{–}S\}]$, 1853–6
The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 2. Reactivity of $[ReO(OR)Cl_2(PPh_3)_2]$ (R = Me or Et) with RNCS (R = Ph or *p*-MeC_6H_4). Crystal structure of the thiazetidine rhenium(V) complex $[ReOCl_2(PPh_3)\{p\text{-}MeC_6H_4N{=}C(OEt)\text{–}S\}]$, 1857–60
Preparation, structure, and nuclear magnetic resonance properties of the nine-vertex *nido*-rhenaborane $[(FMe_2Ph)_3H_2ReB_8H_{11}]$ and some related chemistry, 1969–82
Rhenium complexes of tetra-aza macrocycles: the synthesis and single-crystal *X*-ray structure of *trans*-$[Re(O)_2(cyclam)]Cl\cdot 2(BPh_3\cdot H_2O)$, 2645–8

RHODIUM
A case of solid–state isomerism for a rhodium carbonyl cluster anion. Synthesis, characterization in solution and *X*-ray crystallographic structures of the salts $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot Me_2CO$ and $[NMe_4]_3[Rh_{11}(CO)_{23}]\cdot C_6H_5Me$, 163–72
Rhodium(III) complexes with pyridine-2-thiol (pySH) and pyridine-2-thiolato (pyS) as the only ligands: crystal structures of *mer*-$[Rh(pyS)_3]$, $[Rh(pyS)_2(pySH)_2]Cl\cdot 0.5H_2O$, and $[Rh(pyS)_3(pySH)]$, 227–34
$[RhPd_2(pyS)_4(\eta^3\text{-}C_4H_7)_2][BF_4]$: Synthesis and *X*-ray structure of a mixed-metal trinuclear complex containing two μ_3-pyridine-2-thionato (pyS) ligands, 235–8
X-Ray crystal structure and properties of tetrathiafulvalenium dicarbonyldichlororhodate(I), 253–6
Metal complexes of *N*-aryl-*N*-nitrosohydroxylamines: cleavage of N–N bonds to give metal nitrosyl species and organonitrogen compounds, and the crystal structure of $[RhCl_2\{ONN(C_6H_4Me\text{-}p)O\}(H_2O)(PPh_3)]\cdot 0.5Me_2CO$, 257–64
Tetragonal co-ordination polymers of rhodium(I) with stereochemically rigid aryl di-isocyanide linkages, 469–76
The solution behaviour of $[Rh_2(COMe)_2(CO)_2I_6]^{2-}$, its reactions with CO, pyridine, and methanol, and the *X*-ray structure of $[AsPh_4][Rh(COMe)(CO)(NC_5H_5)I_3]$, 489–96
Stereochemical non-rigidity in rhodium–triruthenium clusters studied by nuclear magnetic resonance spectroscopy, 675–84
Bimetallic complexes of platinum, rhodium, or copper bridged by $Ph_2PCH_2PPh_2$ or $Ph_2PC(=CH_2)PPh_2$ to diazenidorhenium groups; crystal structure of $[(4\text{-}MeC_6H_4N_2)ClRe(\mu\text{-}dppm)_2(\mu\text{-}CO)PtCl]\cdot 2Me_2CO$, 769–74
Rhodium complexes possessing the unidentate anion of 2,4-pentanedione as a ligand; *X*-ray crystal structure of carbonyl(2,4-pentanedionato-*O*)bis(tri-isopropylphosphine)rhodium(I), 895–8
Crystal and molecular structure of the anion $[Rh_7(CO)_{16}]^{3-}$ in its tetramethylammonium salt, 1103–6
Mixed-metal carbido carbonyl clusters. Part 3. Synthesis and structural characterization of $[Rh_6C(CO)_{15}\{Ag(NCMe)\}_2]\cdot 0.5MeOH$, $[Rh_6C(CO)_{15}\{M(PPh_3)\}_2]$ (M = Cu, Ag, or Au), and of the anion $[Rh_6C(CO)_{15}\{Au(PPh_3)\}]^-$ as its PPh_4^+ salt, 1237–48
Synthesis and hydroformylation reaction of dinuclear rhodium(I) complexes with mixed bridging ligands. *X*-Ray structure of $[Rh_2(\mu\text{-}pz)(\mu\text{-}SBu^t)(CO)_2\{P(OMe)_3\}_2]$, 1523–8
Synthesis and single-crystal *X*-ray structure determination of *trans*-$[RhCl_2(tmc)]PF_6$ (tmc = 1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecane), 1561–4
Homogeneous deuteriation of alkenes using $[RhX(PR_3)_3]$ (X = halide, R = aryl) catalysts, 1653–6
Homoleptic hexathia complexes of rhodium. The synthesis, electrochemistry, and single-crystal *X*-ray structure of $[RhL_2][PF_6]_3$ (L = 1,4,7-trithiacyclononane), 1861–6
Tetrazolate rhodium(I) complexes. Crystal structures of the trinuclear complexes $[Rh_3(\mu_3\text{-}ttz)(\mu\text{-}Cl)Cl(cod)_2(CO)_2]$ (ttz = tetrazolate, cod = cyclo-octa-1,5-diene) and $[Rh_3(\mu_3\text{-}ttz)(\mu\text{-}Cl)Cl(CO)_6]$, an unusual example of metal–metal interactions, 1927–34
Pentamethylcyclopentadienylrhodaborane chemistry. Part 4. The

RHODIUM (contd)
isolation, molecular structure, and nuclear magnetic resonance study of an interesting phosphino-bridged *arachno*-type nine-vertex rhodaborane [2,5-(μ-PPh_2)-1-($PHPh_2$)-2-(η^5-C_5Me_5)-2-RhB_8H_9], 2059–64
Iron–rhodium and iron–iridium complexes containing one bridging $Ph_2PCH_2PPh_2$ (dppm) ligand: crystal structure determination of [(η^5-C_5H_5)Fe(μ-CO)$_2$(μ-dppm)$RhMe_{0.4}Cl_{1.6}$], 2099–102
Derivatives of $[Rh_6(CO)_{13}C]^{2-}$: solution structure of $[Rh_6H(CO)_{13}C]^-$ from nuclear magnetic resonance measurements and the *X*-ray crystal structure of $[Rh_6(CO)_{11}C(\mu\text{-}Ph_2PCH_2CH_2PPh_2)]^{2-}$, 2103–8
Synthesis and oxidation reactions of mono- and di-nuclear rhodium carbonyl complexes of (*o*-diphenylphosphino-phenyl)amine, H_2L; *X*-ray structure analysis of a rhodium(II) amido-bridged dimer, [{Rh(μ-HL)(CO)Cl}$_2$]·EtOH, 2287–92
Dinuclear complexes of rhodium and iridium with cyanide or thiocyanate bridges: molecular structure of $[(PMe_2Ph)_3Cl_2Ir(\mu\text{-}CN)IrCl_2(PMe_2Ph)_3][ClO_4]$, 2475–82
Metallaheteroborane chemistry. Part 4. The synthesis of *closo*-[2,2-$(PPh_3)_2$-2-H-1,2-$XMB_{10}H_{10}$] (X = Se or Te, M = Rh or Ir) compounds, their characterisation by nuclear magnetic resonance techniques, and the crystal and molecular structure of the X = Te, M = Rh complex, 2739–46
Pentamethylcyclopentadienylrhodaborane chemistry. Part 5. Preparation, molecular structure, and nuclear magnetic resonance spectra of the *arachno* ten-vertex rhodadecaboranes [6-(η^5-C_5Me_5)-6,9-$(RNC)_2$-*arachno*-6-RhB_9H_{11}] (R = Me or *p*-MeC_6H_4), 2809–16
Synthesis of heterobimetallic complexes containing cobalt–platinum or rhodium–platinum dative bonds. Molecular structure of [(η^5-C_5H_5)$(CO)_2$Rh→Pt(C_6F_5)$_2$(CO)], 3005–10
X-Ray crystal structure of tetra-acetatobis(tetrathiafulvalene)dirhodium(II) and the properties of its iodine-doped complex, 3059–62

RUTHENIUM
Studies on ruthenium(II) macrocyclic amine complexes. Synthesis and *X*-ray structure of the (*R,S,R,R*) isomer of *trans*-$[Ru^{II}(L)(N_3)(NCMe)]PF_6$ (L = 1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecane), 239–42
Metal complexes of *N*-aryl-*N*-nitrosohydroxylamines: cleavage of N–N bonds to give metal nitrosyl species and organonitrogen compounds, and the crystal structure of $[RhCl_2\{ONN(C_6H_4Me\text{-}p)O\}(H_2O)(PPh_3)]$·0.5$Me_2CO$, 257–64
Synthesis of the arene complex [{$RuCl_2(\eta^6$-*o*-$MeC_6H_4CO_2Me)$}$_2$] and separation of its diastereomeric (−)(*S*)-1-phenylethylamine adducts, 315–20
A model for the interpretation of the absorption and circular dichroism spectra of tris(di-imine) complexes of iron(II) and ruthenium(II), 393–400
Complexes of the platinum metals. Part 33. Synthesis of some ruthenium and osmium sulphonate derivatives: *X*-ray crystal structure of aqua(carbonyl)bis(toluene-*p*-sulphonato)bis(triphenylphosphine)ruthenium(II), 415–20
Synthesis, spectroscopic, magnetic and electrochemical properties of diruthenium-(II,II) and -(III,III) complexes con-taining the mixed-carboxylato ligand systems $CH_3CO_2^-$–$CF_3CO_2^-$ and $C_6H_5CO_2^-$–$CF_3CO_2^-$, 661–8
Synthesis of homoleptic tetrahedral aryls of rhenium(IV) and ruthenium(IV). *X*-Ray crystal structures of tetrakis(*o*-methylphenyl)rhenium(IV) tetrakis(*o*-methylphenyl)oxorhenium(VI), and tetrakis(*o*-methylphenyl)ruthenium(IV), 669–74
Stereochemical non-rigidity in rhodium–triruthenium clusters studied by nuclear magnetic resonance spectroscopy, 675–84
The heteronuclear cluster chemistry of the Group 1B metals. Part 5. *X*-Ray crystal structure and dynamic behaviour of the heptanuclear mixed-metal cluster $[Au_3Ru_4(\mu\text{-}H)(CO)_{12}(\mu\text{-}Ph_2PCH_2PPh_2)(PPh_3)]$, 751–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 6. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (M = Cu or Ag, *n* = 1—6). *X*-Ray crystal structures of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (*n* = 2, 3, or 5), 757–68
Carbon-13 and oxygen-17 nuclear magnetic resonance relaxation studies of $[M_3(CO)_{12}]$ derivatives (M = Fe, Ru, or Os), 791–2
Organoruthenaborane chemistry. Part 6. The reaction of [{Ru(η^6-C_6Me_6)Cl_2}$_2$] with the *closo*-$[B_{10}H_{10}]^{2-}$ anion: characterisation of some *closo*-type eleven-vertex 1-ruthenaundecaboranes and the molecular structure of [5-(η^6-C_6Me_6)-6-(OMe)-*nido*-5-RuB_9H_{12}], 925–30
Experimental and theoretical studies of the reactions of electrophiles with cationic formyl complexes; formation of methoxy- and hydroxy-carbene complexes of ruthenium(II) and osmium(II), 1079–82
Synthesis and characterisation of the tetranuclear phosphinidene clusters $[Os_3MH_2(CO)_{12}(PR)]$ (M = Os, R = Ph or cyclo-C_6H_{11} (M = Ru, R = cyclo-C_6H_{11}) and the crystal and molecular structure of $[Os_4(\mu\text{-}H)_2(CO)_{12}(\mu_3\text{-}PC_6H_{11})]$, 1199–204
Tri-, tetra-, penta-, and hexa-nuclear phenylphosphinidene-capped products from the reaction of dodecacarbonyltriruthenium with phenylphosphine: crystal structures of $[Ru_4(\mu_4\text{-}PPh)_2(\mu\text{-}CO)(CO)_{10}]$, $[Ru_5(\mu_4\text{-}PPh)\{\mu\text{-}PPh(OPr^n)\}(\mu\text{-}H)(CO)_{13}]$, $[Ru_6(\mu_4\text{-}PPh)_2(\mu_3\text{-}PPh)_2(CO)_{12}]$, and $[Ru_6(\mu_4\text{-}PPh)_3(\mu_3\text{-}PPh)_2(CO)_{12}]$, 1315–30
The reactions of $[Ru_3(CO)_{12}]$ with nitrogen-containing heterocycles. Crystal structures of $[Ru_3(\mu\text{-}H)(\mu_3\text{-}ppy)(CO)_9]$ and $[Ru_3(\mu\text{-}napy)(\mu\text{-}CO)_3(CO)_7]$, 1437–44
Ruthenium-99 Mössbauer study of ruthenium red and its derivatives, 1679–82
N-Thionitrosamine complexes: substitution reactions of complexes $[MCl(C_6H_4Me\text{-}p)(CO)(PPh_3)_2(SNNMe_2)]$ (M = Ru or Os) and the crystal structure of $[OsCl(C_6H_4Me\text{-}p)(CO)(PPh_3)_2(SNNMe_2)]$, 1693–6
The heteronuclear cluster chemistry of the Group 1B metals. Part 7. Synthesis and gold-197 Mössbauer spectra of the mixed-metal cluster compounds $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)\{\mu\text{-}Ph_2E(CH_2)_nE'Ph_2\}(CO)_{12}]$ (*n* = 1 or 2, E = E′ = As or E = As, E′ = P; *n* = 2, E = E′ = P). *X*-Ray crystal structure of $[Au_2Ru_4(\mu_3\text{-}H)(\mu\text{-}H)(\mu\text{-}Ph_2AsCH_2PPh_2)(CO)_{12}]$, 1795–802
cis-Bis(2,2′-bipyridine)bis(pyridine)ruthenium(II) salts: a spectroscopic and structural study, 1837–42
Studies on transition-metal oxo and nitrido complexes. Part 9. Periodato and tellurato oxo-ruthenium complexes as organic oxidants. *X*-Ray crystal structure of *trans*-$NaK_5[RuO_2(HIO_6)_2]$·$8H_2O$, 1983–8
Equilibria and kinetics of dissociation of triphenylphosphine from [*N,N*′-ethylenebis(salicylideneiminato)]bis(triphenyl-phosphine)ruthenium(II) in benzene, 2007–8
Synthesis, characterisation, and reactivity of new mononitrosyl complexes of ruthenium containing 2-(arylazo)pyridines: examples of strongly electrophilic nitrosyls, 2051–4
Preparation and characterisation of mixed bismuth and ruthenium clusters; *X*-ray crystal structures of $[Ru_3(\mu\text{-}H)_3(CO)_9(\mu_3\text{-}Bi)]$, $[Ru_3(CO)_9(\mu_3\text{-}Bi)_2]$, and $[Ru_4(CO)_{12}(\mu_4\text{-}Bi)_2]$, 2091–8
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. ^{109}Ag-{^1H} INEPT nuclear magnetic resonance studies on $[Ag_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (*n* = 1, 2, or 4) and *X*-ray crystal structure of $[Ag_2Ru_4(\mu_3\text{-}H)_2(\mu\text{-}Ph_2PCH_2PPh_2)(CO)_{12}]$, 2177–86
Ruthenium(IV)–oxo complexes: a novel hydrophobic effect of tertiary phosphine ligands on the selective oxidation of alcohols, 2385–92
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 80. Mixed-metal tungsten and ruthenium compounds, 2467–74
Synthesis and crystal structure of $[Ru(\eta^5\text{-}C_5H_4CH_2CH_2PPh_2)(PPh_3)Cl]$, a compound having a cyclopentadienyl proton with a chemical shift of δ 1.91 p.p.m., 2491–4
Synthesis, characterisation, and catalytic activity of a phosphinidene stabilised tethered triruthenium cluster, 2649–54
The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_nEPh_2\}(CO)_{12}]$ (M = Cu or Ag; E = As or P; *n* = 1 or 2). *X*-Ray crystal structure of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_2PPh_2\}(CO)_{12}]$, 2787–96
Preparation, characterisation, and intramolecular electron-transfer studies on the penta-ammineruthenium histidine-modified high-potential iron–sulphur protein from *Chromatium vinosum*, 2843–50
Co-ordination chemistry of ruthenium with chelating amine ligands:

RUTHENIUM (contd)
synthesis and *X*-ray structural study of the N_6-co-ordinated ruthenium(II) complex of 1,4,8,11-tetrakis(2-pyridylmethyl)-1,4,8,11-tetra-azacyclotetradecane, 2879–84
High-valent ruthenium oxo complexes of *NNN'N'*-tetramethyl-3,6-dimethyl-3,6-diazaoctane-1,8-diamine (L^1). *X*-Ray crystal structure determination of *cis*-$[Ru^{III}(L^1)Cl_2]ClO_4$, 2885–8
Structural comparison of cluster compounds containing an edge-bridging $M(PPh_3)$ (M = Cu, Ag, or Au) fragment. *X*-Ray crystal structure of $[AgRu_3(CO)_9(C_2Bu^t)(PPh_3)]$, 2889–92
Reactions of $[Ru(\eta^5\text{-}C_5H_5)ClL_2]$ (L = PPh_3, $AsPh_3$, or $SbPh_3$; L_2 = $Ph_2PCH_2CH_2PPh_2$ or $Ph_2PCH_2PPh_2$) with 1,4-piperazinedicarbonitrile or 1-piperidinecarbonitrile in the presence of an anion (BF_4^-, PF_6^-, BPh_4^-, or ClO_4^-), 2897–902
Electrophilic behaviour of nitrosyls: the reactions of ketones with nitrosyls and the crystal and molecular structure of the product of the reaction between *trans*-chloro(nitrosyl)tetra(pyridine)ruthenium and acetone, 2965–70

SALINE
Hydrofluoric and hydrochloric acid behaviour in concentrated saline solutions, 705–10

SCHIFF BASE
Structural study of a new type of B_{12} model involving a non-symmetrical equatorial ligand; aquaethyl[*N,N'*-ethylene(acetylacetonylideneiminato)](salicylideneiminato)-cobalt(III), 129–32
Technetium(V) and rhenium(V) complexes with Schiff-base ligands containing the ONNNO donor atom set. Crystal structure of [*N,N'*-3-azapentane-1,5-diylbis(salicylideneiminato)(3−)-*O,O',N,N',N''*]oxotechnetium(V), 611–6
Manganese(IV) and manganese(V) complexes with *N*-(2-hydroxyphenyl)salicylamides, 641–6
Complexes of ligands providing endogenous bridges. Part 5. Solution studies on a novel '3 + 3' hexamine Schiff-base macrocyclic complex of lanthanum, 685–90
Copper(II) complexes of tetradentate Schiff-base ligands derived from aminothioetherimidazoles. Crystal structure determination of {*N*-2-[(5'-methylimidazol-4'-yl)methylthio]ethylsalicylideneiminato(1−)-*O,N,N',S*}copper(II) perchlorate, 839–46
Synthesis and characterization of technetium(III) complexes with Schiff-base and phosphine ligands. Molecular structure of (diethylphenylphosphine)[*N*-(2-oxidophenyl)salicylideneiminato-*NOO'*](quinolin-8-olato-*NO*)technetium(III), 847–50
Dinuclear metal complexes. Part 8. Effect of remote substituents on the redox potentials of mono- and di-nuclear copper(II) complexes, 935–42
Synthesis, characterization, and *X*-ray crystal structures of mononuclear copper(II) complexes with unsymmetrical quadridentate ligands involving an imidazole moiety and discrete imidazolate-bridged binuclear copper(II) complexes with non-identical co-ordination geometries in the binuclear unit, 1021–36
The electrochemical synthesis of neutral copper(II) complexes of Schiff base ligands: the crystal structure of bis{*N*-[2'-2''-pyridyl]ethyl]-4,6-dimethoxysalicylideneiminato}copper(II), 1059–62
cis- and *trans*-Dichloro chelate complexes of niobium(IV): synthesis and structure of *trans*-dichloro[*NN'*-ethylenebis(acetylacetonylideneiminato)(2−)]niobium(IV) and *cis*-dichloro{7,16-dihydro-6,8,15,17-tetramethyldibenzo[*b,i*]-[1,4,8,11]tetra-azacyclotetradecinato(2−)}niobium(IV)–acetonitrile (1/2), 1361–6
Technetium(V)–nitrido complexes of dithiocarbazic acid derivatives. Reactivity of $[Tc{\equiv}N]^{2+}$ core towards Schiff bases derived from *S*-methyl dithiocarbazate. Crystal structures of [*S*-methyl 3-(2-hydroxyphenylmethylene)dithiocarbazato]nitrido(triphenylphosphine)technetium(V) and bis(*S*-methyl 3-isopropylidenedithiocarbazato)nitridotechnetium(V), 1743–50
Binuclear nickel(II) and copper(II) complexes containing an endogenous alkanethiolato-bridging sulphur atom and exogenous μ-pyrazolate (pz) group. Crystal structure of $[Ni_2L(pz)]$ [L = *NN'*-3-mercaptopentane-1,5-diylbis(salicylideneiminate)(3−)], 1823–6
Synthesis and *X*-ray crystal structures of an imidazolate-bridged polynuclear copper(II) complex exhibiting a unique helicoid structure and its precursor mononuclear complex, 1943–8
Equilibria and kinetics of dissociation of triphenylphosphine from [*N,N'*-ethylenebis(salicylideneiminato)]bis(triphenylphosphine)ruthenium(II) in benzene, 2007–8
Five-co-ordinate magnesium complexes: synthesis and structure of quadridentate Schiff-base derivatives, 2341–6
Synthesis and characterization of a crown-ether substituted salicylaldimine Schiff-base ligand and its complexes with cobalt(II), copper(II), nickel(II), and uranyl(VI), 2831–6
Water-soluble hexadentate Schiff-base ligands as sequestrating agents for iron(III) and gallium(III), 2927–34

SELENIDE
Phosphorus-31 and selenium-77 nuclear magnetic resonance spectra of tetraphosphorus triselenide, 2055–8

SELENIUM
Phosphorus-31 and selenium-77 nuclear magnetic resonance spectra of tetraphosphorus triselenide, 2055–8

SELENIUM-77
Phosphorus-31 and selenium-77 nuclear magnetic resonance spectra of tetraphosphorus triselenide, 2055–8

SELENOLATE
Reactions of some main group metals with diphenyl disulphide and diphenyl diselenide, 1045–8
Preparation and characterization of alkane– and arene–chalcogenolate complexes of η^5-cyclopentadienyltitanium(IV): first synthesis of $[Ti(\eta^5\text{-}C_5H_5)(SeCH_3)_3]$, 1529–32

SEQUESTRATION
Water-soluble hexadentate Schiff-base ligands as sequestrating agents for iron(III) and gallium(III), 2927–34

SILATRANE
Photoelectron spectroscopic studies of the electronic structure of some silatranes, 1963–8

SILICA
Preparation and properties of piperazine silicate (EU-19) and a silica polymorph (EU-20), 2513–8

SILICATE
A two-dimensional silicon-29 nuclear magnetic resonance spectroscopic study of the structure of the silicate anions present in an aqueous potassium silicate solution, 1457–60
Preparation and properties of piperazine silicate (EU-19) and a silica polymorph (EU-20), 2513–8

SILICON
Electron diffraction study of the molecular structures of monomethylsilyl isocyanate and monomethylsilyl isothiocyanate in the gas phase, 1193–8
Photoelectron spectroscopic studies of the electronic structure of some silatranes, 1963–8
Preparation and properties of piperazine silicate (EU-19) and a silica polymorph (EU-20), 2513–8

SILICON-29
A two-dimensional silicon-29 nuclear magnetic resonance spectroscopic study of the structure of the silicate anions present in an aqueous potassium silicate solution, 1457–60

SILOXANE
Synthesis, characterization, and electrochemistry of dicyclopentadienylsiloxane-bridged dicarbonyldi-iron, 833–8

SILVER
Synthesis of benzyl- or pentafluorobenzyl-diphenylphosphonio(diphenylphosphino)methanide complexes of gold(I) and gold(III) and their use as C-donor ligands, 155–8
Synthesis of pentafluorophenyl(ylide)silver(I) complexes: *X*-ray structures of two modifications of $[Ag(C_6F_5)(CH_2PPh_3)]$, 341–6
Reactions of pentafluorophenyl(ylide)-silver(I) or -gold(I) complexes with chlorobis(pentafluorophenyl)thallium(III), 701–4
The heteronuclear cluster chemistry of the Group 1B metals. Part 6. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (M = Cu or Ag, n = 1—6). *X*-Ray crystal structures of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 2, 3, or 5), 757–68
Mixed-metal carbido carbonyl clusters. Part 3. Synthesis and structural characterization of $[Rh_6C(CO)_{15}\{Ag(NCMe)\}_2]$·0.5MeOH, $[Rh_6C(CO)_{15}\{M(PPh_3)\}_2]$ (M = Cu, Ag, or Au), and of the anion $[Rh_6C(CO)_{15}\{Au(PPh_3)\}]^-$ as its PPh_4^+ salt, 1237–48
Co-ordination chemistry of higher oxidation states. Part 26. Spectroscopic studies of tellurate complexes of the trivalent Group 1B metals. *X*-Ray structure of

SILVER (contd)
$Na_5[Cu\{TeO_4(OH)_2\}_2]\cdot 16H_2O$, 1377–82
Deprotonation of a heterodinuclear transition-metal hydride complex and reactions of the anion with electrophiles: *X*-ray crystal structures of $[(\eta^5\text{-}C_5H_5)(OC)_2Mo\{\mu\text{-}Ag(PPh_3)\}(\mu\text{-}PPh_2)Mn(CO)_4]$ and $[(\eta\text{-}C_5H_5)(OC)_2Mo(\mu\text{-}I)(\mu\text{-}PPh_2)Mn(CO)_4]$, 1683–8
Preparation and nuclear magnetic resonance spectroscopy of $[Ag_2\{\mu\text{-}CH_2(PPh_2)_2\}_3][O_3SCF_3]_2$, a disilver(I) complex with three bridging $CH_2(PPh_2)_2$ ligands, 1709–12
Equilibrium measurements for silver(I) complexes with polyamines in dimethyl sulphoxide, 1781–4
Two compounds containing dinuclear three-co-ordinated halogenoargentate(I) anions: crystal structures of bis(tetraphenylphosphonium) di-μ-chloro-dichlorodiargentate(I) and bis(tetraphenylphosphonium) di-μ-bromo-dibromodiargentate(I), 2117–20
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. $^{109}Ag\text{-}\{^1H\}$ INEPT nuclear magnetic resonance studies on $[Ag_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 1, 2, or 4) and *X*-ray crystal structure of $[Ag_2Ru_4(\mu_3\text{-}H)_2(\mu\text{-}Ph_2PCH_2PPh_2)(CO)_{12}]$, 2177–86
Syntheses and reactivity of acetylide-containing clusters of Group 1B metals. Stepwise syntheses of trinuclear $[Au_2Cu(C_2Ph)_4]^-$ and pentanuclear $[Au_3Cu_2(C_2Ph)_6]^-$ and $[Au_3Ag_2(C_2Ph)_6]^-$ clusters, 2297–300
Silver(I)–phenoxyalkanoates. The crystal and molecular structures of polymeric [(4-chloro-2-methylphenoxy)ethano-ato-*O*,*O*′]silver(I), [(2,4-dichlorophenoxy)ethanoato-*O*,*O*′]silver(I), and di-μ-[(2-chlorophenoxy)ethanoato-*O*,*O*′]disilver(I)–silver(I) perchlorate (1/1), 2353–6
The first complexes of cyanogen halides with silver(I): crystal structure of $[Ag(NCCl)_2][SbF_6]$, 2507–8
The heteronuclear cluster chemistry of the Group 1B metals. Part 10. Synthesis, structures, and dynamic behaviour of the bimetallic hexanuclear Group 1B metal cluster compounds $[M_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_nEPh_2\}(CO)_{12}]$ (M = Cu or Ag; E = As or P; n = 1 or 2). *X*-Ray crystal structure of $[Cu_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2As(CH_2)_2PPh_2\}(CO)_{12}]$, 2787–96
Structural comparison of cluster compounds containing an edge-bridging $M(PPh_3)$ (M = Cu, Ag, or Au) fragment. *X*-Ray crystal structure of $[AgRu_3(CO)_9(C_2Bu^t)(PPh_3)]$, 2889–92

SILVER-109
The heteronuclear cluster chemistry of the Group 1B metals. Part 9. Stereochemical non-rigidity of the metal skeletons of cluster compounds in solution. $^{109}Ag\text{-}\{^1H\}$ INEPT nuclear magnetic resonance studies on $[Ag_2Ru_4(\mu_3\text{-}H)_2\{\mu\text{-}Ph_2P(CH_2)_nPPh_2\}(CO)_{12}]$ (n = 1, 2, or 4) and *X*-ray crystal structure of $[Ag_2Ru_4(\mu_3\text{-}H)_2(\mu\text{-}Ph_2PCH_2PPh_2)(CO)_{12}]$, 2177–86

SODIUM
Metal–phenoxyalkanoic acid interactions. Part 28. Crystal and molecular structures of the sodium, ammonium, and magnesium complexes of (*o*-phenylenedioxy)diacetic acid, 2357–62

SOLVENT EFFECT
Solvent effects on the protonation constants of *N*,*N*′-bis(2-carbamoylethyl)ethylenediamine and the equilibrium constants for its copper(II) complexes in methanol–water mixtures, 541–4
Studies involving mixed-donor macrocyclic ligands. A comparative study of the influence of medium effects on the stabilities of complexes of Co^{II}, Ni^{II}, and Cu^{II} with 14- to 16-membered O_2N_2-donor macrocycles, 1733–6
Equilibrium measurements for silver(I) complexes with polyamines in dimethyl sulphoxide, 1781–4
Axial co-ordination and ion-pair formation for *R*,*S*,*R*,*S*-1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecanenickel(II) perchlorate in various mixed solvents with nitrobenzene, 1935–42
A new approach to measurement of the donor strength and co-ordination chemistry of various solvents by oxidation of metal amalgam electrodes in dichloromethane, 2379–84
Ruthenium(IV)–oxo complexes: a novel hydrophobic effect of tertiary phosphine ligands on the selective oxidation of alcohols, 2385–92
Co-ordination behaviour of dioxouranium(VI) nitrate in water–acetone mixtures, 2893–6

SOLVENT EXTRACTION
Thermodynamics of extraction equilibria. Part 7. Solvent extraction of thorium nitrate with tri-n-butyl phosphate, 1813–6
Uncommon complex stoicheiometry in solvent extraction: solution-phase dicationic complex formation of crown ethers, 2735–8

STABILITY
Binary and ternary metal complexes of guanosine: stability and thermodynamic parameters, 67–72
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 421–6
Solvent effects on the protonation constants of *N*,*N*′-bis(2-carbamoylethyl)ethylenediamine and the equilibrium constants for its copper(II) complexes in methanol–water mixtures, 541–4
Formation and reaction of trichloro complexes of bivalent transition metals in 1,2-dichloroethane, 591–4
Hydrofluoric and hydrochloric acid behaviour in concentrated saline solutions, 705–10
A potentiometric and spectroscopic study of the interaction of angiotensin II and some of its peptide fragments with copper(II), 887–94
Kinetics and mechanisms of the reactions of nickel(II) with 4,4,4-trifluoro-1-(2-thienyl)butane-1,3-dione in aqueous solution, 905–8
Possible biological activity in proton, metal, and aminohydroxamic acid equilibria. Protonation and complex formation reactions between *N*-hydroxy-D-asparagine and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution, 953–60
Potentiometric study on the complex-formation equilibria between 2-amino-*N*-hydroxyhexanamide and α-amino-1*H*-indole-3-*N*-hydroxypropanamide and cobalt(II), nickel(II), copper(II), and hydrogen ions in aqueous solution **(1988, 421)**, 1107
Thermodynamic and spectrophotometric study of copper(II) and cadmium(II) homo- and hetero-nuclear complexes with L-histidylglycine in an aqueous medium, 1115–20
Mixed metal complexes in solution. Part 5. Equilibrium and conformational study of heterobinuclear metal(II) isoserine complexes in aqueous solution, 1267–72
Thermodynamic and spectroscopic studies on the protonation and Cu^{2+} complex formation of a synthetic amino diacid: (3-aminopropyl)malonic acid, 1273–80
Copper(II) complexes with some tetrapeptides containing the 'break-point' prolyl residue in the third position, 1357–60
Studies involving mixed-donor macrocyclic ligands. A comparative study of the influence of medium effects on the stabilities of complexes of Co^{II}, Ni^{II}, and Cu^{II} with 14- to 16-membered O_2N_2-donor macrocycles, 1733–6
Equilibrium measurements for silver(I) complexes with polyamines in dimethyl sulphoxide, 1781–4
Zinc(II) complexes of dipropylenetriamine and *N*-(2-aminoethyl)propane-1,3-diamine: a carbon-13 nuclear magnetic resonance study, 1989–98
Equilibria and kinetics of dissociation of triphenylphosphine from [*N*,*N*′-ethylenebis(salicylideneiminato)]bis(triphenylphosphine)ruthenium(II) in benzene, 2007–8
The complexation of iron(III) with sulphate, phosphate, or arsenate ion in sodium nitrate medium at 25 °C, 2015–22
Anaerobic oxidation of cysteine to cystine by iron(III). Part 2. The reaction in basic solution, 2109–12
Complex equilibria in aqueous solutions of Ti^{3+}–glycine and –malonic acid, 2231–4

STACKING
Solid-state structures of platinum–sulphur–nitrogen stacking compounds: $[Pt(S_2N_2)(PMe_2Ph)_2]$, $[Pt(S_2N_2H)(PMe_2Ph)_2]Cl$, $[Pt(S_2N_2H)(PMe_2Ph)_2]PF_6$, and $[Pd(S_2N_2H)(PMe_2Ph)_2]BF_4$, 803–8
Crystal structure of $NH_4[Ni\{S_2C_2(CN)_2\}_2]\cdot H_2O$, the first equidistant stack d^7 monoanion metal dithiolene complex, 1689–92

STANNYL
Ligand substitution of $[M(SnPh_3)(MeCN)_2(CO)_2(NO)]$ (M = Cr or W) and crystal structure of $[Cr(SnPh_3)(MeCN)\{P(OMe)_3\}(CO)_2(NO)]$, 1397–400

STEREOCHEMISTRY
Preparation, molecular structure, and stereochemical properties of

STEREOCHEMISTRY (contd)
copper(II) complexes co-ordinated to (3*S*)- and (*RS*)-3-aminopiperidine: effect of ring size on stereochromism, 1543–8
STIBINE
Reactions of phosphine, arsine, and stibine with carbonylbis(triethylphosphine)iridium(I) halides. Part 2. Reactions in dichloromethane, 477–84
STYRENE
Synthesis and structural study of (2,2′-bipyridine)perchlorato(styrene)copper(I), 1907–10
SUBSTITUTION
Mechanistic studies on iron phosphine complexes. Part 1. Protonation and substitution of *trans*-$[FeH(X)(diphosphine)_2]$ (X = Cl or Br, diphosphine = $Et_2PCH_2CH_2PEt_2$ or $Ph_2PCH_2CH_2PPh_2$), 509–14
Mechanistic studies on iron phosphine complexes. Part 2. Protonation and substitution reactions of dinitrogen complexes, 515–20
Acid- and base-catalysed displacement of the carboxylate ligand from $[Pt(dien)(RCO_2)]^+$ (dien = 1,5-diamino-3-azapentane; R = CH_2Cl, $CHCl_2$, or CCl_3) in aqueous solution, 1049–52
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$, 2239–40
Nucleophilic discrimination and the *trans* effect. The kinetics of displacement of X from *trans*-$[Pt(L)(X)Cl_2]^{n-}$ (L = Me_2SO, Et_2S, PMe_3, PEt_3, PPh_3, or $AsEt_3$; X = Cl, *n* = 1; X = MeOH, *n* = 0) by neutral and anionic nucleophiles, 2347–52
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$ **(1988, 2239)**, 2683
SULPHATE
The complexation of iron(III) with sulphate, phosphate, or arsenate ion in sodium nitrate medium at 25 °C, 2015–22
SULPHIDE
Formation and structure of $[Ni_3(\mu_3\text{-}S)(\mu\text{-}SMe)_3(SMe)_3]^{2-}$, a cyclic trinuclear metal–sulphide–thiolate cluster with simple monofunctional thiolate ligands, 657–60
Photoelectron spectra of sulphidoborons XBS where X = H, F, Cl, or Br, 2041–6
Caesium tetrathiotungstate(VI). Matrix isolation and mass spectrometric studies of a ternary sulphide which is stable in the vapour, 2047–50
Synthesis and reactivity of dienyl–metal compounds. Part 30. Alkylation of thiolato bridges: a route to stable dialkyl sulphide bridged dinuclear molybdenum complexes. Crystal structure determination of $[(\eta\text{-}C_5H_5)(CO)Mo(\mu\text{-}SMe_2)_2Mo(PMe_3)(\eta\text{-}C_5H_5)][BF_4]_2$, 2171–6
Indium(III) halide complexes with trimethylphosphine sulphide and trimethylarsine sulphide: structures and bonding of $[InX_3(Me_3MS)_2]$ (X = Cl or Br, M = P or As) and $[InCl_3(H_2O)(Me_3AsS)_2]$, 2187–92
Scrambling of P–SP and P–SC bonds between tetraphosphorus decasulphide and phosphorotetrathioic esters, 2221–4
Crystal structure of 2,4-bis(phenylthio)-1,3-dithia-2λ^5,4λ^5-diphosphetane 2,4-disulphide, 2225–6
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$, 2239–40
On the reduction of iron–sulphur clusters under carbon monoxide, 2329–34
Preparation and redox properties of the cuboidal molybdenum(III) aqua ion $[Mo_4S_4(H_2O)_{12}]^{4+}$, 2579–84
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$ **(1988, 2239)**, 2683
Heterobimetallic clusters derived from $[MS_4]^{2-}$ (M = Mo or W): synthesis and structural characterization of $[NMe_4]_4[(CuCl)_5Cl_2WS_4]$, a double cubane-like complex, 3055–8
SULPHINATE
Sulphonation of palladium–carbon bonds: synthesis and *X*-ray crystal structures of the disulphinato derivatives $[Pd\{S(O)_2CH_2CH_2CH_2CH_2S(O)_2\}(tmen)]$ (tmen = $Me_2NCH_2CH_2NMe_2$) and $[Pd\{S(O)_2Me\}_2(tmen)]$, 461–8
SULPHONATE
Complexes of the platinum metals. Part 33. Synthesis of some ruthenium and osmium sulphonate derivatives: *X*-ray crystal structure of aqua(carbonyl)bis(toluene-*p*-sulphonato)bis(triphenylphoshine)ruthenium(II), 415–20
SULPHONATION
Sulphonation of palladium–carbon bonds: synthesis and *X*-ray crystal structures of the disulphinato derivatives $[Pd\{S(O)_2CH_2CH_2CH_2CH_2S(O)_2\}(tmen)]$ (tmen = $Me_2NCH_2CH_2NMe_2$) and $[Pd\{S(O)_2Me\}_2(tmen)]$, 461–8
SULPHUR
Cyclic sulphur–nitrogen compounds and phosphorus reagents. Part 2. Reactions of tetrasulphur tetranitride with (morpholino)diphenylphosphine. First observation of the ring contraction of 1,5-$[(OC_4H_8N)Ph_2PN]_2S_4N_4$ to $(OC_4H_8N)Ph_2PNS_3N_3$ in solution, 1445–8
Stereochemical rigidity of the square-pyramidal $W(CO)_5$ moiety during 1,2- and 1,3-metallotropic shifts in sulphur ligand complexes, 1489–92
Novel synthetic routes to disulphur and disulphur monoxide ligands: nucleophilic attack at co-ordinated imino-oxo-λ^4-sulphanes, 2027–32
Crystal structure of 2,4-bis(phenylthio)-1,3-dithia-2λ^5,4λ^5-diphosphetane 2,4-disulphide, 2225–6
Stereoelectronic effects in R–NSN–R systems. An MNDO and *ab initio* SCF-MO study, 3051–4
SULPHUR DIOXIDE
Reaction of manganese(II) arsine oxide complexes with sulphur dioxide: some unexpected products. The *X*-ray crystal structure of $[(Ph_3AsO)_2H]I_3$, 1095–8
Facilitation of the substitution reactions of triangular platinum cluster compounds and the structural characterisations of $[Pt_3(\mu\text{-}SO_2)_3\{P(C_6H_{11})_3\}_3]$ and $[NEt_4][Pt_3(\mu\text{-}Br)(\mu\text{-}SO_2)_2\{P(C_6H_{11})_3\}_3]$ by single-crystal *X*-ray techniques, 1461–6
Synthesis and structural characterisation of some *triangulo*- and binuclear clusters of platinum from the reaction of $[Pt_3(\mu\text{-}SO_2)_3\{P(C_6H_{11})_3\}_3]$ with 2,6-xylyl isocyanide, 1509–16
SULPHURIC ACID
Mechanism of reactions of some N^1-substituted biguanides with chromium(VI) in aqueous sulphuric acid media, 1557–60
SUPPORT
Synthesis, characterisation, and catalytic activity of a phosphinidene stabilised tethered triruthenium cluster, 2649–54
TECHNETIUM
Technetium(V) and rhenium(V) complexes with Schiff-base ligands containing the ONNNO donor atom set. Crystal structure of [*N*,*N*′-3-azapentane-1,5-diylbis(salicylideneiminato)(3−)-*O*,*O*′,*N*,*N*′,*N*″]oxotechnetium(V), 611–6
Synthesis and characterization of technetium(III) complexes with Schiff-base and phosphine ligands. Molecular structure of (diethylphenylphosphine)[*N*-(2-oxidophenyl)salicylideneiminato-*NOO*′](quinolin-8-olato-*NO*)technetium(III), 847–50
Preparation and crystal structures of $[AsPh_4]_4[Tc_4N_4O_2(ox)_6]$ and $[AsPh_4]_2[TcO(ox)_2(Hox)]\cdot 3H_2O$: technetium complexes containing quadridentate or unidentate oxalato ligands, 1725–32
Technetium(V)–nitrido complexes of dithiocarbazic acid derivatives. Reactivity of $[Tc{\equiv}N]^{2+}$ core towards Schiff bases derived from *S*-methyl dithiocarbazate. Crystal structures of [*S*-methyl 3-(2-hydroxyphenylmethylene)dithiocarbazato]nitrido(triphenylphosphine)technetium(V) and bis(*S*-methyl 3-isopropylidenedithiocarbazato)nitridotechnetium(V), 1743–50
An electron spin resonance and optical study of the behaviour of $Cs_2[TcNCl_5]$ in hydrochloric acid solutions, 2585–90
TELLURATE
Studies on transition-metal oxo and nitrido complexes. Part 9. Periodato and tellurato oxo-ruthenium complexes as organic oxidants. *X*-Ray crystal structure of *trans*-$NaK_5[RuO_2(HIO_6)_2]\cdot 8H_2O$, 1983–8
TELLURIUM
Synthesis, crystal and molecular structure of tetraphenylarsonium bis(maleonitriledithiolato)tellurate(II), $[AsPh_4]_2[Te(mnt)_2]$, and single-crystal electron spin resonance spectra of the system $[AsPh_4]_2[Cu/Te(mnt)_2]$, 97–100
Co-ordination chemistry of higher oxidation states. Part 26. Spectroscopic studies of tellurate complexes of the trivalent Group 1B metals. *X*-Ray structure of $Na_5[Cu\{TeO_4(OH)_2\}_2]\cdot 16H_2O$, 1377–82

TELLURIUM (contd)
A new modification of $TiTe_3O_8$, 2083–6
Formation and transformation of $3TeO_2{\cdot}Nb_2O_5$, 2087–90
Synthesis and characterization of the new mixed oxides $M(VTe)O_6$ (M = K, Rb, or Cs), 2141–4
2-Pyridyl- and quinolin-2-yl-functionalised organyltellurium ligands. The stabilisation of diorganyl tritellurides. The crystal and molecular structures of 2-(2-pyridyl)phenyltellurium(IV) tribromide, dimethyldithiocarbamato[2-(2-pyridyl)phenyl]tellurium(II), and *p*-ethoxyphenyl 2-(2-pyridyl)phenyl telluride, 2363–72
Metallaheteroborane chemistry. Part 3. Synthesis of $[2,2\text{-}(PR_3)_2\text{-}1,2\text{-}TePtB_{10}H_{10}]$ (R_3 = Et_3, $Bu^n{}_3$, or Me_2Ph), their characterisation by nuclear magnetic resonance spectroscopy, and the crystal and molecular structure of $[2,2\text{-}(PEt_3)_2\text{-}1,2\text{-}TePtB_{10}H_{10}]$, 2555–64
TEMPLATE
Comparisons of thirteen- to sixteen-membered tetra-azacycloalkane copper(II) complexes derived from template syntheses involving nitroethane and formaldehyde. Crystal structures of (10-methyl-10-nitro-1,4,8,12-tetra-azacyclopentadecane)copper(II) and (3-methyl-3-nitro-1,5,9,13-tetra-azacyclohexadecane)copper(II) perchlorates, 2145–52
Template reactions of 1,4-bis(α-carboxybenzylidenehydrazino)phthalazine with cobalt(II), nickel(II), and chromium(III), 2293–6
TERPYRIDINE
Preparation, *X*-ray crystal structure, and properties of $[V(S_2)_2(terpy)]$: intramolecular coupling of the sulphide ligands of $[VS_4]^{3-}$, 1705–8
TETRA-AZABICYCLOHEPTADECATRIENE
Electrochemical studies of nickel(II) and cobalt(II) complexes of tetra-azamacrocycles bearing a pyridine functional group and *X*-ray structures of $[Ni^{II}(L^3)Cl]ClO_4$ and $[Ni^{II}(L^3)][ClO_4]_2{\cdot}H_2O\{L^3$ = *meso*-2,3,7,11,12-pentamethyl-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene$\}$, 2153–60
TETRA-AZACYCLOALKANE
Comparisons of thirteen- to sixteen-membered tetra-azacycloalkane copper(II) complexes derived from template syntheses involving nitroethane and formaldehyde. Crystal structures of (10-methyl-10-nitro-1,4,8,12-tetra-azacyclopentadecane)copper(II) and (3-methyl-3-nitro-1,5,9,13-tetra-azacyclohexadecane)copper(II) perchlorates, 2145–52
TETRA-AZACYCLOTETRADECADIENE
The preparation of 5,7,7,12,14-pentamethyl-1,4,8,11-tetra-azacyclotetradeca-4,11-diene and its complexes with copper(II), nickel(II), zinc(II), and cobalt(III), 2763–8
TETRA-AZACYCLOTETRADECANE
Rhenium complexes of tetra-aza macrocycles: the synthesis and single-crystal *X*-ray structure of *trans*-$[Re(O)_2(cyclam)]Cl{\cdot}2(BPh_3{\cdot}H_2O)$, 2645–8
Co-ordination chemistry of ruthenium with chelating amine ligands: synthesis and *X*-ray structural study of the N_6-co-ordinated ruthenium(II) complex of 1,4,8,11-tetrakis(2-pyridylmethyl)-1,4,8,11-tetra-azacyclotetradecane, 2879–84
TETRA-AZACYCLOTRIDECANE
Synthesis of a thirteen-membered tetra-azamacrocycle employing formaldehyde and nitroalkanes directed by metal ions. Crystal structures of (12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)copper(II) perchlorate and 2-(12-methyl-12-nitro-1,4,7,10-tetra-azacyclotridecane)dicopper(II), 497–502
TETRAFLUOROBORIC ACID
Interaction of acetonitrilebis(cyclopentadienyl)molybdenum(II) or tris(acetonitrile)tricarbonylmolybdenum(0) in acetonitrile with tetrafluoroboric acid. *X*-ray crystal structures of $[Mo^{IV}(\eta^5\text{-}C_5H_5)_2(MeCN)(CH{=}CHMe)][BF_4]_2$, $[Mo^{IV}(\eta^5\text{-}C_5H_5)_2(PMe_3)_2][BF_4]_2$, $[Mo^0(CO)_2(MeCN)_3(\eta^3\text{-}CH_2CHNH_2)]_2BF_3$, and $[Mo^{III}{}_2(\mu\text{-}O)(MeCN)_{10}][BF_4]_4$, 1737–42
TETRAFLUOROPHENOL
Temperature study of the solution conformations of aqueous lanthanide(III) complexes containing monodentate ligands, 2315–22
TETRATHIAFULVALENE
X-Ray crystal structure and properties of tetrathiafulvalenium dicarbonyldichlororhodate(I), 253–6
X-Ray crystal structure of tetra-acetatobis(tetrathiafulvalene)dirhodium(II) and the properties of its iodine-doped complex, 3059–62
TETRAZOLATE
Tetrazolate rhodium(I) complexes. Crystal structures of the trinuclear complexes $[Rh_3(\mu_3\text{-}ttz)(\mu\text{-}Cl)Cl(cod)_2(CO)_2]$ (ttz = tetrazolate, cod = cyclo-octa-1,5-diene) and $[Rh_3(\mu_3\text{-}ttz)(\mu\text{-}Cl)Cl(CO)_6]$, an unusual example of metal–metal interactions, 1927–34
Synthesis and characterization of bis(phenyltetrazolato)-germanium(IV) and -tin(IV) porphyrins, 2569–72
THALLIUM
Reactions of pentafluorophenyl(ylide)-silver(I) or -gold(I) complexes with chlorobis(pentafluorophenyl)thallium(III), 701–4
A new approach to measurement of the donor strength and co-ordination chemistry of various solvents by oxidation of metal amalgam electrodes in dichloromethane, 2379–84
THERMOCHEMISTRY
The thermochemistry of ammonium compounds and the energy barrier opposing ammonium ion reorientation, 445–50
THERMODYNAMICS
Calorimetric study on oxygen addition to cobalt(II) complexes with tris(2-aminoethyl)amine and 3,7-diazanonane-1,9-diamine, 373–80
Thermodynamic and spectrophotometric study of copper(II) and cadmium(II) homo- and hetero-nuclear complexes with L-histidylglycine in an aqueous medium, 1115–20
Thermodynamic and spectroscopic studies on the protonation and Cu^{2+} complex formation of a synthetic amino diacid: (3-aminopropyl)malonic acid, 1273–80
Heterocyclic *N*-oxide ligands: a thermochemical study of adducts with zinc, cadmium, and mercury chlorides, 2113–6
Thermodynamic and kinetic studies on the complexation reactions of copper(II) with *NN'*-bis(β-carbamoylethyl)-*trans*-cyclohexane-1,2-diamine, 2495–500
Determination of the thermodynamic equilibrium constants of ion exchange process, 2565–8
Structures of borate–aldohexose and borate–chetohexose complexes in aqueous solution. A thermodynamic study, 2971–4
THIABORANE
Polyhedral thiaborane chemistry: a comparative nuclear magnetic resonance study of *arachno*-$[6\text{-}SB_9H_{12}]^-$ and *nido*-$6\text{-}SB_9H_{11}$, 1467–74
THIADIAZOLE
Crystal and molecular structure of bis(2-amino-5-methyl-1,3,4-thiadiazole-N^3)dibromomercury(II). A spectroscopic study and INDO calculations, 1075–8
THIOAMIDE
Synthesis, reactions and copper(II), nickel(II), and zinc(II) complexes of *N*-(2-pyridinyl)ketothioacetamides, 433–44
THIOCARBAMATE
Synthesis, characterization, and crystal structures of tin(IV) 1-pyrrolethiocarboxylates, 1533–42
THIOCARBENE
Reactions of the metallacycle $[(OC)(cp)\overline{FeC(SMe)SC(FeL_n)S}]^+$ with nucleophiles. *X*-Ray crystal structures of the complexes $[(OC)(cp)\overline{FeC(NC_5H_{10})SC(FeL_n)S}]SO_3CF_3$ and $[(OC)(cp)\overline{FeC\{(CN)(SMe)\}SC(FeL_n)S}]$ [FeL_n = $Fe(cp)(CO)_2$, cp = $\eta\text{-}C_5H_5$], 1067–74
THIOCARBONATE
The chemisty of heteroallene and heteroallyl derivatives of rhenium. Part 1. Reactivity of mixed carbonyl(formamido)(phosphine)rhenium(I) complexes with RNCS (R = Ph or *p*-MeC_6H_4) and PhNCO. Crystal structure of the thiazetidine rhenium(I) complex $[Re(CO)_2(PPh_3)_2\{PhN{=}C(OEt){-}S\}]$, 1853–6
The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 2. Reactivity of $[ReO(OR)Cl_2(PPh_3)_2]$ (R = Me or Et) with RNCS (R = Ph or *p*-MeC_6H_4). Crystal structure of the thiazetidine rhenium(V) complex $[ReOCl_2(PPh_3)\{p\text{-}MeC_6H_4N{=}C(OEt){-}S\}]$, 1857–60
THIOCYANATE
Neutral chain bromide- and iodide-bridged platinum(II,IV) complexes of 1,2-diaminoethane and thiocyanate: synthesis, electronic, infrared, Raman, and resonance-Raman studies, 73–8
Synthesis, spectroscopy, and crystal structure of a thiocyanato-bridged mixed-valence copper(I)–copper(II)

THIOCYANATE (contd)
compound with the ligand 1,6-bis(5′-methylimidazol-4′-yl)-2,5-dithiahexane, 1337–40
The chemisty of heteroallene and heteroallyl derivatives of rhenium. Part 1. Reactivity of mixed carbonyl(formamido)(phosphine)rhenium(I) complexes with RNCS (R = Ph or *p*-MeC_6H_4) and PhNCO. Crystal structure of the thiazetidine rhenium(I) complex $[Re(CO)_2(PPh_3)_2\{PhN{=}C(OEt){-}S\}]$, 1853–6
The chemistry of heteroallene and heteroallyl derivatives of rhenium. Part 2. Reactivity of $[ReO(OR)Cl_2(PPh_3)_2]$ (R = Me or Et) with RNCS (R = Ph or *p*-MeC_6H_4). Crystal structure of the thiazetidine rhenium(V) complex $[ReOCl_2(PPh_3)\{p\text{-}MeC_6H_4N{=}C(OEt){-}S\}]$, 1857–60
Discontinuous high spin $\rightleftharpoons$ low spin transition in an iron(II) complex $[FeL_2(NCS)_2]$ with the pharmaceutical agent bromazepam, 1999–2002
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$, 2239–40
Synthesis and chemical characterization of the hexanuclear anions $[Ir_6(CO)_{14}X]^-$ (X = Cl, Br, I, or SCN). Crystal and molecular structures of $[PPh_4][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}Br)]$ and $[N(PPh_3)_2][Ir_6(\mu\text{-}CO)_2(CO)_{12}(\mu\text{-}X)]$ (X = I or SCN), 2307–14
Dinuclear complexes of rhodium and iridium with cyanide or thiocyanate bridges: molecular structure of $[(PMe_2Ph)_3Cl_2Ir(\mu\text{-}CN)IrCl_2(PMe_2Ph)_3][ClO_4]$, 2475–82
Concurrent NCS^- substitution at non-equivalent molybdenum(IV) centres of the incomplete cuboidal aqua ion $[Mo_3(\mu_3\text{-}S)(\mu\text{-}O)(\mu\text{-}S)_2(H_2O)_9]^{4+}$ **(1988, 2239)**, 2683
Molten acetamide–potassium thiocyanate eutectic: spectroscopy of first-row transition metal compounds in a room temperature melt, 2701–4

THIODIKETONATE
Preparation and characterization of diorgano- and dihalogeno-bis(monothio-β-diketonato)tin(IV) complexes. Crystal and molecular structures of $SnY_2(btbm)_2$ and $SnY_2(tacac)_2$ (Y = Me or Cl), 407–14
Reinvestigation of the synthesis of tris[benzoyl(thiobenzoyl)methanato-*S*]arsenic(III): synthesis and *X*-ray structure of 3,3′-thiodi(1,3-diphenylprop-2-en-1-one), 1289–92

THIOETHER
Stereochemical non-rigidity of dithioether complexes of trimethylplatinum(IV) halides. *X*-Ray crystal structures of $[PtClMe_3(MeSCH_2CH_2SEt)]$ and $[PtIMe_3(MeSCH_2CH_2SBu^t)]$, 521–32
Crystal structure and spectroscopic properties of mercury(II) halide complexes. Part 4. Crystal and molecular structure and circular dichroism spectra of the chiral 1:1 adduct $(S)_a(S)_c(-)_{589}$-methyl 2-phenylbutyl thioether-mercury(II) chloride, 2915–20

THIOLATE
Cyclo-oligomerisation reactions of bis(alkyne) and η^2-vinyl complexes of molybdenum and tungsten with t-butyl isocyanide leading to iminocyclopentadiene derivatives, 27–34
An improved route to the synthesis of μ-(alkane- or arene-thiolato)(μ-ethenyl)di-iron complexes. Crystal structure of μ-phenylmethanethiolato-μ-(1,2-diphenylethenyl)-hexacarbonyldi-iron(*Fe–Fe*), 281–4
Formation and structure of $[Ni_3(\mu_3\text{-}S)(\mu\text{-}SMe)_3(SMe)_3]^{2-}$, a cyclic trinuclear metal–sulphide–thiolate cluster with simple monofunctional thiolate ligands, 657–60
Reactivity of rhenium(I) pseudo-allyl complexes with heterocumulenes. Part 2. Insertion reactions. Crystal structures of the thiazolyl-thioureido and -dithiocarbamato complexes $[Re(CO)_2(PPh_3)_2\{SC(NPh)NMe(C_3H_2NS)\}]\cdot CH_2Cl_2$ and $[Re(CO)_2(PPh_3)_2\{S_2CNMe(C_3H_2NS)\}]\cdot CH_2Cl_2$ (C_3H_2NS = thiazol-2-yl), 899–904
Reactions of some main group metals with diphenyl disulphide and diphenyl diselenide, 1045–8
Synthesis and hydroformylation reaction of dinuclear rhodium(I) complexes with mixed bridging ligands. *X*-Ray structure of $[Rh_2(\mu\text{-}pz)(\mu\text{-}SBu^t)(CO)_2\{P(OMe)_3\}_2]$, 1523–8
Preparation and characterization of alkane- and arene–chalcogenolate complexes of η^5-cyclopentadienyltitanium(IV): first synthesis of $[Ti(\eta^5\text{-}C_5H_5)(SeCH_3)_3]$, 1529–32
Synthesis and reactivity of dienyl–metal compounds. Part 30. Alkylation of thiolato bridges: a route to stable dialkyl sulphide bridged dinuclear molybdenum complexes. Crystal structure determination of $[(\eta\text{-}C_5H_5)(CO)Mo(\mu\text{-}SMe_2)_2Mo(PMe_3)(\eta\text{-}C_5H_5)][BF_4]_2$, 2171–6
X-Ray crystal structure of (2,2′-bipyrimidine)(1,2,-dicyanoethylene-1,2-dithiolato(2−)]platinum(II)–*N,N*-dimethylformamide and properties of PtS_2N_2-type complexes, 2215–20
On the reduction of iron–sulphur clusters under carbon monoxide, 2329–34
Dinitrogen complexes of osmium(II) with thiolate co-ligands: *X*-ray structure of *mer*-$[OsCl(SC_6F_5)(N_2)(PMe_2Ph)_3]$, 2393–6
Studies on gold(II) complexes with hard and soft donor ligands. Part 1. Complexes with *o*-aminobenzenethiol, 2607–14

THIONATE
$[RhPd_2(pyS)_4(\eta^3\text{-}C_4H_7)_2][BF_4]$: Synthesis and *X*-ray structure of a mixed-metal trinuclear complex containing two μ_3-pyridine-2-thionato (pyS) ligands, 235–8
Di- and tri-nuclear complexes of palladium(II) containing doubly- and triply-bridging pyridine-2-thionato (pyS) ligands: crystal structure of $[Pd_3(C_6H_4CH_2NMe_2)_3(pyS)_2][BF_4]$, 2193–200

THIONE
Rhodium(III) complexes with pyridine-2-thiol (pySH) and pyridine-2-thiolato (pyS) as the only ligands: crystal structures of *mer*-$[Rh(pyS)_3]$, $[Rh(pyS)_2(pySH)_2]Cl\cdot 0.5H_2O$, and $[Rh(pyS)_3(pySH)]$, 227–34

THIONITROSAMINE
N-Thionitrosamine complexes: substitution reactions of complexes $[MCl(C_6H_4Me\text{-}p)(CO)(PPh_3)_2(SNNMe_2)]$ (M = Ru or Os) and the crystal structure of $[OsCl(C_6H_4Me\text{-}p)(CO)(PPh_3)_2(SNNMe_2)]$, 1693–6

THIOPHENOLATE
Synthesis and *X*-ray crystal structure of acetonitriletetrakis(2,4,6-triisopropylthiophenolato)molybdenum(IV), 2535–8

THIOPHOSPHINATE
Mono- and bi-nuclear four-membered methanide auracycles; synthesis and reactivity. *X*-Ray structure of *cis*-$[Au(C_6F_5)_2(SPPh_2O)(CH_2PPh_2Me)]$, 2323–8

THIOUREATE
A novel 'tent-like' structure of a copper(I) aggregate. The crystal and molecular structure of nona[*N*-diethoxythiophosphoryl)-*N*′-phenylisothioureato]decacopper(I) perchlorate, 1915–20

THORIUM
f-Element–crown ether complexes. Part 9. The role of solvent hydrogen bonding: synthesis and crystal structure of aquatetrachlorotris(ethanol)thorium(IV)–1,4,7,10,13,16-hexaoxacyclo-octadecane–water (1/1/1), 13–6
Thermodynamics of extraction equilibria. Part 7. Solvent extraction of thorium nitrate with tri-n-butyl phosphate, 1813–6
The infrared spectra of matrix isolated thorium and uranium tetrachlorides. Change of shape with matrix gas, 2759–62

TIN
Preparation and characterization of diorgano- and dihalogeno-bis(monothio-β-diketonato)tin(IV) complexes. Crystal and molecular structures of $SnY_2(btbm)_2$ and $SnY_2(tacac)_2$ (Y = Me or Cl), 407–14
Surface acidity of the layered pyrophosphates of quadrivalent Ti, Zr, Ge, and Sn and their activity in some acid-catalysed reactions, 881–6
Organotin biocides. Part 11. Triphenyltin benzoates: electronic *versus* steric control of structure, 1259–66
Synthesis, characterization, and crystal structures of tin(IV) 1-pyrrolethiocarboxylates, 1533–42
Crystal and molecular structure of 1,2;3,4-di-μ-*o*-aminobenzoato-*OO*′-1,3-bis(*o*-aminobenzoato-*O*)-1,2,4;2,3,4-di-μ_3-oxo-tetrakis[di-n-butyltin(IV)], 1719–24
Synthesis and structural characterisation of a novel high-nuclearity gold–tin cluster compound, $[Au_8(PPh_3)_7(SnCl_3)]_2\text{-}[SnCl_6]$, 1751–6
Synthesis and characterization of diazido–germanium(IV) and -tin(IV) porphyrins. Crystal structure of diazido(5,10,15,20-tetra-*p*-tolylporphyrinato)germanium(IV), 1921–6
The direct electrochemical synthesis of tin(II) derivatives of aromatic 1,2-diols, and a study of their oxidative addition reactions, 2539–44
Synthesis and characterization of bis(phenyltetrazolato)-germanium(IV) and -tin(IV) porphyrins, 2569–72
An *X*-ray crystallographic investigation of the structures of pyrazine adducts of diphenyltin dichloride and dimethyltin dichloride, 2621–8

TITANIUM
Surface acidity of the layered pyrophosphates of quadrivalent Ti, Zr, Ge, and Sn and their activity in some acid-catalysed reactions, 881–6
The chemistry of dinitrogen residues. Part 5. [Tris(pyrazolyl)borato]-complexes of titanium(III); the crystal structures of trimethylhydrazinium trichloro[tris(3,5-dimethylpyrazolyl)borato]titanate(III) and dichloro(3,5-dimethylpyrazole)-[tris(3,5-dimethylpyrazolyl)borato]titanium(III), 1153–8
Preparation and characterization of alkane– and arene–chalcogenolate complexes of η^5-cyclopentadienyltitanium(IV): first synthesis of $[Ti(\eta^5\text{-}C_5H_5)(SeCH_3)_3]$, 1529–32
A new modification of $TiTe_3O_8$, 2083–6
An investigation of the titanium–antimony–oxygen system by *X*-ray diffraction, antimony-121 Mössbauer spectroscopy, and temperature-programmed reduction, 2161–6
Antimony-doped rutile titanium(IV) oxide, 2167–70
Complex equilibria in aqueous solutions of Ti^{3+}–glycine and –malonic acid, 2231–4
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 82. Dimetallic compounds prepared from the complexes $[MR_2(\eta\text{-}C_5H_5)_2]$ (R = Cl or Bu^n, M = Ti or Zr), 3031–4
TRANSITION METAL
Binary and ternary metal complexes of guanosine: stability and thermodynamic parameters, 67–72
Effect of geometrical isomerism on metal nuclear magnetic resonance chemical shifts in octahedral d^6 transition-metal complexes, 79–82
Synthesis, structure, and spectroscopic and magnetic properties of *catena*-μ-aqua-diaquabis(2,6-dimethoxybenzoato)metal(II) monohydrate complexes of manganese, cobalt, nickel, and zinc. *X*-Ray crystal structure of $[Co(dmba)_2(H_2O)_3]\cdot H_2O$, 363–8
Synthesis and characterization of metal-free and metal derivatives of a novel soluble crown-ether-containing phthalocyanine, 401–6
Formation and reaction of trichloro complexes of bivalent transition metals in 1,2-dichloroethane, 591–4
Raman spectra of some transition-metal imido complexes, 647–50
Binucleating N_6 24- and 26-membered macrocyclic ligands. Part 2. Transition-metal homo- and hetero-binuclear complexes: *X*-ray crystallographic structure determination of a lead–manganese heterobinuclear complex, 1001–10
Studies of pendant arm macrocyclic ligands. Part 6. Synthesis of two penta-aza macrocyclic ligands containing single pendant co-ordinating 2-pyridylmethyl and 1-pyrazolylmethyl arms, and characterisation of their nickel(II), copper(II), cobalt(II), and zinc(II) complexes. Crystal structure of {3,11-dibenzyl-7-(2′-pyridylmethyl)-3,7,11,17-tetra-azabicyclo[11.3.1]heptadeca-1(17),13,15-triene}zinc(II) perchlorate, 1089–94
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 72. Di- and tri-metal compounds prepared from the alkylidyne tungsten complexes $[W(\equiv CR)(CO)_3\{H_2B(pz)_2\}]$[R = C_6H_4Me-4 or Me, $H_2B(pz)_2$ = dihydrobis(pyrazol-1-yl)borate], 1139–46
Role of the nature of the metal centre in the catalysed addition of β-dicarbonyls to electrophilically activated nitriles, 1213–6
Spectroscopic studies on the hexafluorides of rhenium, osmium, iridium, and platinum isolated in low-temperature matrices, 1341–6
A theoretical analysis of high-nuclearity metal carbonyl clusters, 1657–64
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 74. Salts of the anions $[W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]^-$ (R = C_6H_4Me-2 or $C_6H_3Me_2$-2,6) as reagents for the synthesis of compounds with heteronuclear metal–metal bonds: crystal structure of $[NEt_4][FeW(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta^5\text{-}C_2B_9H_9Me_2)]$, 1879–90
Ligand-field traces in three- and five-co-ordinated transition-metal(III) complexes, 2201–10
Molecular helicity in inorganic complexes; double helical binuclear complexes of 2,2′:6′,2″:6″,2‴:6‴,2⁗-quinquepyridine (L): crystal structures of $[Cu_2L_2(O_2CMe)][PF_6]_3\cdot H_2O$ and $[Cu_2L_2][PF_6]_3\cdot 2MeCN$, 2655–62
Molten acetamide–potassium thiocyanate eutectic: spectroscopy of first-row transition metal compounds in a room temperature melt, 2701–4
The preparation of 5,7,7,12,14-pentamethyl-1,4,8,11-tetra-azacyclotetradeca-4,11-diene and its complexes with copper(II), nickel(II), zinc(II), and cobalt(III), 2763–8
Synthesis and characterization of a crown-ether substituted salicylaldimine Schiff-base ligand and its complexes with cobalt(II), copper(II), nickel(II), and uranyl(VI), 2831–6
Stepwise ligand dissociation and multiple changes in oxidation state in the fast atom bombardment mass spectra of cyanometalate complexes of transition metals, 2905–12
The nitrogen-15 nuclear magnetic resonance criterion of bond angle in diazenido-complexes, 2935–40
Synthesis, *X*-ray structure, and reactivity with Lewis acids of metallacyclopentane derivatives of rhodium(III) and iridium(III). Observation of the first boron trifluoride-promoted C–H bond activation in transition metal alkyls, 2983–94
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 83. Molybdenum and tungsten complexes containing the alkylidyne group $C\{\eta^6\text{-}C_6H_4(OMe\text{-}2)Cr(CO)_3\}$, 3035–40
TRANSMETALLATION
Synthesis of cyclometallated naphthylpalladium complexes *via* transmetallation reactions of naphthylmercury with palladium species. Crystal structure determination of $[\{Pd(mxn)(O_2CMe)\}]$, 2975–82
TRANSPORT
Some observations on the mechanism of passive transport, 1293–6
TRIAZINE
Copper(II)-assisted hydrolysis of 2,4,6-tris(2-pyridyl)-1,3,5-triazine. Part 1. Crystal structures of [bis(2-pyridylcarbonyl)amido](2-pyridylformamide)copper(II) perchlorate monohydrate and [bis(2-pyridylcarbonyl)amido]copper(II) perchlorate, 2033–40
TRIAZOLATE
Dicopper(II) complexes of a binucleating N_4 macrocycle containing mono- and di-atomic bridges; magnetic interactions mediated by alkoxo- and diaza-bridging ligands. Crystal structures of $[Cu_2(L^1)(pz)_2][ClO_4]_2$, $[Cu_2(L^1)(OEt)_2(NCS)_2]$, and $[Cu_2(L^1)(OMe)_2(MeCN)_2][BPh_4]_2$, 2995–3004
TRICHLOROACETONITRILE
Role of the nature of the metal centre in the catalysed addition of β-dicarbonyls to electrophilically activated nitriles, 1213–6
TRIFLUOROMETHANESULPHONATE
Trifluoromethanesulphonato-*O* complexes of platinum(II) and palladium(II), 931–4
TRIPHOSPHINE
Complexes of 1,1,2-tris(diphenylphosphino)ethane with Group 6 metal carbonyls, 503–8
TRITHIACYCLONONANE
Homoleptic hexathia complexes of rhodium. The synthesis, electrochemistry, and single-crystal *X*-ray structure of $[RhL_2][PF_6]_3$ (L = 1,4,7-trithiacyclononane), 1861–6
TUNGSTEN
Cyclo-oligomerisation reactions of bis(alkyne) and η^2-vinyl complexes of molybdenum and tungsten with t-butyl isocyanide leading to iminocyclopentadiene derivatives, 27–34
Synthesis and reactions of d^0 imido aryl derivatives of chromium, molybdenum, and tungsten. Crystal structures of $Cr(NBu^t)_2(C_6H_2Me_3\text{-}2,4,6)_2$, $Mo(NBu^t)_2(C_6H_3Me_2\text{-}2,6)_2$, and $Cr(NBu^t)_2[C(C_6H_2Me_3\text{-}2,4,6)=NBu^t](C_6H_2Me_3\text{-}2,4,6)$, 53–60
Conjugate addition of acetylides to complexes of type $[M(CO)_4\{(Ph_2P)_2C{=}CH_2\}]$ (M = Cr, Mo, or W): crystal structure of $[M(CO)_4\{(Ph_2P)_2C{=}CHCH{=}CHPh\}]$ formed by the base-catalysed isomerization of $[M(CO)_4\{(Ph_2P)_2\text{-}CHCH_2C{\equiv}CPh\}]$, 89–92
Photocatalytic dimerization of olefins by decatungstate(VI), $[W_{10}O_{32}]^{4-}$, in acetonitrile and magnetic resonance studies of photoreduced species, 183–90
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 69. Reactions of $[MoW(\equiv CC_6H_4Me\text{-}4)(CO)_7(\eta\text{-}C_5H_5)]$ with but-2-ene; crystal structures of $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)\}(CO)_3(\eta\text{-}MeC_2Me)_2(\eta\text{-}C_5H_5)]$ and $[MoW\{\mu\text{-}C(C_6H_4Me\text{-}4)C(=CH_2)C(H)MeC(O)\}(CO)_6(\eta\text{-}C_5H_5)]\cdot 0.5CH_2Cl_2$, 207–14
Electron spin resonance studies of the solution photochemistry of octacyanotungstate(V) ions at 77 and 293 K, 285–92
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and tungsten nitrosyls. Part 7. Compounds containing strongly interacting redox centres derived from *para*-substituted anilines and phenols, 293–300
Monometallic, homo- and hetero-bimetallic complexes based on redox-active tris(3,5-dimethylpyrazolyl)borato molybdenum and

TUNGSTEN (contd)
tungsten nitrosyls. Part 8. Complexes exhibiting weak or intermediate interaction between two redox centres, 301–8
Complexes of 1,1,2-tris(diphenylphosphino)ethane with Group 6 metal carbonyls, 503–8
Diazoalkane complexes of molybdenum and tungsten *via* hydrazido(2−)-complexes, 553–6
Production of binary oxides by photolysis of $M(CO)_6$ molecules (M = Cr, Mo, or W) isolated in O_2-doped argon matrices, 809–18
Dithiocarbamates of tungsten(III) and tungsten(IV) **(1987, 2531)**, 1107
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 70. Tetranuclear metal compounds with rhenium–molybdenum or –tungsten bonds. Crystal structures of $[Mo_2Re_2(\mu_3\text{-}CC_6H_4Me\text{-}4)_2(\mu\text{-}CO)_2(CO)_7(\eta\text{-}C_5H_5)_2]\cdot 1.5CH_2Cl_2$ and $[W_2Re_2(\mu\text{-}H)(\mu_3\text{-}\sigma\text{:}\sigma'\text{:}\eta^2\text{-}C{=}CH_2)(\mu_3\text{-}CMe)(\mu\text{-}CO)(CO)_8(\eta\text{-}C_5H_5)_2]$, 1121–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 71. Synthesis of tungsten–iridium complexes crystal structures of $[W_2Ir(\mu_3\text{-}RC_2R)Cl(CO)_4(\eta\text{-}C_5H_5)_2]\cdot CH_2Cl_2$ and $[W_2Ir(\mu\text{-}CR)(\mu_3\text{-}CR)Cl(CO)_4(\eta\text{-}C_5H_5)_2]$ (R = C_6H_4Me-4), 1131–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 72. Di- and tri-metal compounds prepared from the alkylidyne tungsten complexes $[W(\equiv CR)(CO)_3\{H_2B(pz)_2\}]$[R = C_6H_4Me-4 or Me, $H_2B(pz)_2$ = dihydrobis(pyrazol-1-yl)borate], 1139–46
Ligand substitution of $[M(SnPh_3)(MeCN)_2(CO)_2(NO)]$ (M = Cr or W) and crystal structure of $[Cr(SnPh_3)(MeCN)\{P(OMe)_3\}(CO)_2(NO)]$, 1397–400
Pentamethylcyclopentadienyl molybdenum and tungsten carbene complexes. *X*-Ray crystal structures of *cis*- and *trans*-$[MoI(CO)_2\{{=}C(CH_2)_3O\}(\eta\text{-}C_5Me_5)]$, 1449–56
Stereochemical rigidity of the square-pyramidal $W(CO)_5$ moiety during 1,2- and 1,3-metallotropic shifts in sulphur ligand complexes, 1489–92
Complexes of osmium, uranium, molybdenum, and tungsten with the catechol amines adrenaline, noradrenaline, dopamine, dopa, and isoproterenol, 1817–22
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$, 1867–78
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 74. Salts of the anions $[W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]^-$ (R = C_6H_4Me-2 or $C_6H_3Me_2$-2,6) as reagents for the synthesis of compounds with heteronuclear metal–metal bonds: crystal structure of $[NEt_4][FeW(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta^5\text{-}C_2B_9H_9Me_2)]$, 1879–90
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 75. Reactions of octacarbonyldicobalt with the salts $[X][W(\equiv CR)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$ (X = NEt_4 or PPh_4; R = Me, Ph, C_6H_4Me-2, or C_6H_4Me-4); crystal structure of $[PPh_4][Co_2W(\mu_3\text{-}CPh)(CO)_8(\eta^5\text{-}C_2B_9H_9Me_2)]\cdot 0.5CH_2Cl_2$, 1891–8
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4), 1899–906
Synthesis of new heteronuclear complexes with bridging carbyne ligands between tungsten and gold. *X*-Ray crystal structure of $[AuW(\mu\text{-}CC_6H_4Me\text{-}4)(CO)_2(bipy)(C_6F_5)Br]$, 1957–62
Caesium tetrathiotungstate(VI). Matrix isolation and mass spectrometric studies of a ternary sulphide which is stable in the vapour, 2047–50
Synthesis and dynamic nuclear magnetic resonance studies of co-ordinatively unsaturated alkyne complexes of tungsten(II), 2071–6
Aquanonadecatungstodiphosphate(14−) polyanion, $[P_2W_{19}O_{69}(OH_2)]^{14-}$: *X*-ray crystallographic structure of its potassium salt, chemical relationships in the tungstophosphate system, and conversion into the diaquaicosatungsto-diphosphate $[P_2W_{20}O_{70}(OH_2)_2]^{10-}$, 2411–20
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 79. Synthesis and reactions of the alkylidynemetal complexes $[M(\equiv CR)(CO)_2(\eta\text{-}C_5H_5)]$ (R = $C_6H_3Me_2$-2,6, M = Cr, Mo, or W; R = C_6H_4Me-2, C_6H_4OMe-2, or $C_6H_4NMe_2$-4, M = Mo); crystal structure of the compound $[MoFe(\mu\text{-}CC_6H_3Me_2\text{-}2,6)(CO)_5(\eta\text{-}C_5H_5)]$, 2453–66
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 80. Mixed-metal tungsten and ruthenium compounds, 2467–74
Organohydrazido(2−) complexes of molybdenum and tungsten from α,ω-dibromides; crystal and molecular structures of (azetidinylimido)bis[1,2-bis(di-*p*-tolylphosphino)ethane]bromotungsten bromide–dichloromethane (1/3), 2525–34
The protonation of molybdenum and tungsten bis(diphosphine)bis(dinitrogen) complexes: the crystal and molecular structure of bis[1,2-bis(diethylphosphino)ethane]bromo[hydrazido(2−)]tungsten bromide–methanol (2/1), 2545–54
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 73. Reactions of $[WCo(\equiv CR)(CO)_8]$ (R = C_6H_4Me-4 or Me) with alkynes. Crystal structures of $[WCo\{\mu\text{-}C(C_6H_4Me\text{-}4)C(Me)C(Me)C(O)\}(CO)_6(PPh_3)]$ and $[WCo\{\mu\text{-}C(Ph)C(Me)C(Me)C(OH)\}(CO)_6(PPh_3)][BF_4]$ **(1988, 1867)**, 2683
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 76. Alkylidyne–alkyne coupling reactions involving the complexes $[WCo(\equiv CR)(CO)_8]$ (R = Me or C_6H_4Me-4) **(1988, 1899)**, 2683
Synthesis and spectroscopic properties of the 'mixed' seven-co-ordinate complexes $[MI_2(CO)_3L(L')]$ [M = Mo or W; L,L' = PPh_3, $PPh_2(C_6H_{11})$, $PPh(C_6H_{11})_2$, $AsPh_3$, or $SbPh_3$] and rearrangement of selected $[MI_2(CO)_3L(L')]$ to $[HL][MI_3(CO)_3L']$. *X*-Ray crystal structure of $[PPh_2(C_6H_{11})H][WI_3(CO)_3(SbPh_3)]\cdot Et_2O$, 2729–34
Organic chemistry of dinitrogen and related ligands. Part 7. *N*-Vinylation or oxidative replacement of the hydrazido(2−) ligand in reactions of $[WX(dppe)_2(NNH_2)]Y$ (dppe = $Ph_2PCH_2CH_2PPh_2$, X = F or Br, Y = BF_4 or Br) with cyanoalkenes. *X*-Ray crystal structure of $[WBr(dppe)_2\{NC(Br)C(CN)C(CN)_2\}]$, 2781–6
η^3- and η^7-Cycloheptatrienyltungsten chemistry: synthesis of $[W(\eta^5\text{-}C_7H_9)(\eta^3\text{-}C_7H_7)(PMe_3)_2]$ and $[W(\eta\text{-}C_7H_7)(\eta^3\text{-}C_7H_{11})(PMe_3)]$, 2851–4
Co-ordinatively unsaturated alkyne complexes of tungsten: synthesis and dynamic nuclear magnetic resonance studies of some but-2-yne derivatives, 2855–64
Reconsideration of the crystal structure refinement of the complex $[PPh_4][W(\equiv CC_6H_4Me\text{-}4)(CO)_2(\eta^5\text{-}C_2B_9H_9Me_2)]$, 2903–4
Synthetic and structural studies on organomolybdenum and organotungsten complexes containing bismuth. *X*-Ray crystal structures of $[BiCl\{Mo(CO)_3(\eta\text{-}C_5H_5)\}_2]$ and $[BiCl\{Mo(CO)_2(CNBu^t)(\eta\text{-}C_5H_5)\}_2]$, 2941–52
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 81. Reactions of the compound $[Fe_2(\mu\text{-}CH_2)(CO)_8]$ with alkylidyne–molybdenum and –tungsten complexes. Reactivity of the product $[WFe\{\mu\text{-}\sigma\text{:}\eta\text{-}CH{=}CH(C_6H_4Me\text{-}4)\}(CO)_6(\eta\text{-}C_5H_5)]$, and crystal structures of the species $[W_2Fe(\mu_3\text{-}CC_6H_4Me\text{-}4)\{\mu\text{-}\sigma\text{:}\eta\text{-}C(C_6H_4Me\text{-}4){=}CH_2\}(CO)_6(\eta\text{-}C_5H_5)_2]$ and $[WFe\{\mu\text{-}C(Et)C(Et)C(H)CH(C_6H_4Me\text{-}4)\}(\mu\text{-}CO)(CO)_4(\eta\text{-}C_5H_5)]$, 3017–30
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 82. Dimetallic compounds prepared from the complexes $[MR_2(\eta\text{-}C_5H_5)_2]$ (R = Cl or Bu^n, M = Ti or Zr), 3031–4
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 83. Molybdenum and tungsten complexes containing the alkylidyne group $C\{\eta^6\text{-}C_6H_4(OMe\text{-}2)Cr(CO)_3\}$, 3035–40
Heterobimetallic clusters derived from $[MS_4]^{2-}$ (M = Mo or W): synthesis and structural characterization of $[NMe_4]_4[(CuCl)_5Cl_2WS_4]$, a double cubane-like complex, 3055–8

TUNGSTEN-183
Photocatalytic dimerization of olefins by decatungstate(VI), $[W_{10}O_{32}]^{4-}$, in acetonitrile and magnetic resonance studies of photoreduced species, 183–90

URANIUM
Kinetics of oxidation of uranium(IV) by permanganate ion in aqueous perchlorate media, 601–4

URANIUM (contd)
Complexes of osmium, uranium, molybdenum, and tungsten with the catechol amines adrenaline, noradrenaline, dopamine, dopa, and isoproterenol, 1817–22
The infrared spectra of matrix isolated thorium and uranium tetrachlorides. Change of shape with matrix gas, 2759–62
Co-ordination behaviour of dioxouranium(VI) nitrate in water–acetone mixtures, 2893–6
VANADIUM
Crystal and molecular structure of bis(tetraphenylphosphonium) bis(1,2-dicyanoethylene-1,2-dithiolato)oxovanadate(IV). Its single-crystal electron spin resonance as a pure compound and diluted in the isomorphous molybdenum(IV) compound, 309–14
Electronic spectrum and metal–ligand bonding parameters of the $V(H_2O)_6^{3+}$ ion, 1393–6
Ligand-field analysis of the ion VO^{2+}: application of the angular overlap model to the electronic absorption spectrum of bis(acetylacetonato)oxovanadium(IV) in various solvents, 1665–70
Preparation, *X*-ray crystal structure, and properties of $[V(S_2)_2(terpy)]$: intramolecular coupling of the sulphide ligands of $[VS_4]^{3-}$, 1705–8
Synthesis and characterization of the new mixed oxides $M(VTe)O_6$ (M = K, Rb, or Cs), 2141–4
Structure, vibrational and electronic spectra, and bonding in *trans*-diaquabis(oxalato)vanadate(III) complex salts, $A[V(C_2O_4)_2(H_2O)_2]\cdot xH_2O$ (A = Cs, K, or NH_3Me), and the *X*-ray crystal structure of the potassium salt ($x = 3$), 2245–54
Formation of carbonato and hydroxo complexes of vanadium(IV) on reaction of carbonylbis(η-pentamethylcyclopentadienyl)vanadium(II) with dinitrogen oxide, 2505–6
VAPORIZATION
Matrix isolation and mass spectrometric studies on the vaporisation of OsO_2F_3: characterisation of molecular OsO_2F_3, 997–1000
VINYL
Reaction of $[FeCo(CO)_7(\mu\text{-}CH{=}CRH)]$ (R = H or Ph) with dimethylphenylphosphine. Synthesis and structure of $[FeCo(CO)_4(\mu\text{-}CO)(PMe_2Ph)_2(\mu\text{-}CH{=}CH_2)]$, an electronically unbalanced iron–cobalt complex, 1417–20
Dinuclear allyl and μ-vinyl complexes from the reactions of a μ-hydrido dimanganese and a μ-hydrido manganese– molybdenum complex with alkynes containing α-methyl or α-methylene substituents, 2953–8
VINYLOXY
Reaction of the lithium enolate of acetaldehyde, $Li(OCH{=}CH_2)$, with cyclothiaphosphazenes, 1099–102
VIOLURATE
Low-spin six-co-ordinate cobalt(II) complexes. A solution study of tris(violurato)cobaltate(II) ions, 101–4
VITAMIN
Structural study of a new type of B_{12} model involving a non-symmetrical equatorial ligand; aquaethyl[*N*,*N*′-ethylene(acetylacetonylideneiminato)](salicylideneiminato)cobalt(III), 129–32
***X*-RAY DIFFRACTION**
X-Ray photoelectron diffraction studies of the micas lepidolite and biotite, 859–80
An investigation of the titanium–antimony–oxygen system by *X*-ray diffraction, antimony-121 Mössbauer spectroscopy, and temperature-programmed reduction, 2161–6
Antimony-doped rutile titanium(IV) oxide, 2167–70
Preparation and properties of piperazine silicate (EU-19) and a silica polymorph (EU-20), 2513–8
YLIDE
Synthesis of benzyl- or pentafluorobenzyl-diphenylphosphonio(diphenylphosphino)methanide complexes of gold(I) and gold(III) and their use as C-donor ligands, 155–8
Synthesis of pentafluorophenyl(ylide)silver(I) complexes: *X*-ray structures of two modifications of $[Ag(C_6F_5)(CH_2PPh_3)]$, 341–6
Reactions of pentafluorophenyl(ylide)-silver(I) or -gold(I) complexes with chlorobis(pentafluorophenyl)thallium(III), 701–4
Functionalized isocyanides as ligands. Part 5. Syntheses and reactions of 3-(benzylphosphonio)indolin-2-ylidene complexes of platinum(II). *X*-Ray crystal structure of *trans*-$[Pt\{o\text{-}\dot{C}N(H)C_6H_4\dot{C}[P(CH_2Ph)_2Ph]\}X(PPh_3)_2]BF_4\cdot 2C_2H_4Cl_2$ (X = Cl or Br), 1803–12
Mono- and bi-nuclear four-membered methanide auracycles; synthesis and reactivity. *X*-Ray structure of *cis*-$[Au(C_6F_5)_2(SPPh_2O)(CH_2PPh_2Me)]$, 2323–8
Addition of halogens to $[\{Au(CH_2)_2PPh_2\}_2RX]$ complexes. The structures of *cis*,*trans*-$[\{Au(CH_2)_2PPh_2\}_2(CH_2CF_3)Br_3]$ and *trans*,*trans*-$[\{Au(CH_2)_2PPh_2\}_2(CHCl_2)Br_2Cl]$, 2669–74
ZINC
Synthesis, reactions and copper(II), nickel(II), and zinc(II) complexes of *N*-(2-pyridinyl)ketothioacetamides, 433–44
Octabutoxyphthalocyanine, a new electron donor, 549–52
A single-crystal electron spin resonance study of manganese(II)-doped zinc maleate tetrahydrate, 983–6
Mixed metal complexes in solution. Part 5. Equilibrium and conformational study of heterobinuclear metal(II) isoserine complexes in aqueous solution, 1267–72
Copper(II) and zinc(II) co-ordination compounds of tridentate bis(benzimidazole)pyridine ligands. Crystal and molecular structures of bis[2,6-bis(1′-methylbenzimidazol-2′-yl)pyridine]copper(II) diperchlorate monohydrate and (acetonitrile)[2,6-bis(benzimidazol-2′-yl)pyridine](perchlorato)copper(II) perchlorate, 1429–36
Zinc(II) complexes of dipropylenetriamine and *N*-(2-aminoethyl)propane-1,3-diamine: a carbon-13 nuclear magnetic resonance study, 1989–98
Analytical electron microscopy discloses actual structure of zinc–graphite, 2023–6
Heterocyclic *N*-oxide ligands: a thermochemical study of adducts with zinc, cadmium, and mercury chlorides, 2113–6
Synthesis and co-ordination chemistry of two penta-azamacrocycles containing a 1,4-piperazine backbone. Crystal structure determinations of 6,12-dioxo-1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-triene and 1,5,13,17,22-penta-azatricyclo[15.2.2.1^{7,11}]docosa-7(22),8,10-trienenickel(II) perchlorate, 2959–64
ZIRCONIUM
Pillar chemistry. Part 4. Palladium(II)–2,2′-bipyridyl, –1,10-phenanthroline, and –2,9-dimethyl-1,10-phenanthroline complex pillars in α-zirconium phosphate, 851–8
Surface acidity of the layered pyrophosphates of quadrivalent Ti, Zr, Ge, and Sn and their activity in some acid-catalysed reactions, 881–6
Chemistry of polynuclear metal complexes with bridging carbene or carbyne ligands. Part 82. Dimetallic compounds prepared from the complexes $[MR_2(\eta\text{-}C_5H_5)_2]$ (R = Cl or Bu^n, M = Ti or Zr), 3031–4